

EVIDENTIARY HEARING
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of the Complaint)
Against:)
Ormat Nevada, Inc. brought by) Docket No. 11-CAI-02
California Unions for Reliable)
Energy)
-----)

CALIFORNIA ENERGY COMMISSION
HEARING ROOM A
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

MONDAY, SEPTEMBER 26, 2011
9:31 A.M.

JAMES F. PETERS CSR, RPR
CERTIFIED SHORTHAND REPORTER
LICENSE NUMBER 10063

Contract No. 170-09-002

APPEARANCESCOMMITTEE MEMBERS

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Robert Weisenmiller, Associate Member

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INTERVENOR

County of Imperial
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Remy, Thomas, Moose & Manley, LLP

ALSO PRESENT

Imperial County Air Pollution Control District
Rosario Gonzalez, Deputy County Counsel

Dale Evenson
Riverside County Fire Department

Mavis Scanlon

Mark Nero

Ramona Cota

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1 STAFF COUNSEL OGATA: Good morning. My name is
2 Jeff Ogata. I'm counsel for staff. And to my left is Bob
3 Worl who's the project manager.

4 PRESIDING MEMBER DOUGLAS: Thank you. And
5 intervenor, Imperial County.

6 MR. WILKINS: Good morning. My name is Howard
7 Wilkins. I represent intervenor County of Imperial.

8 PRESIDING MEMBER DOUGLAS: Thank you.

9 All right. So welcome, everybody. Welcome to
10 the parties. Let me ask if anyone on the phone or in the
11 room is here representing the Imperial County Air
12 Pollution Control District.

13 MS. GONZALEZ: Rosario Gonzalez, Deputy County
14 Counsel, County of Imperial.

15 PRESIDING MEMBER DOUGLAS: Thank you.

16 I'm sorry. I'll try again, just because we were
17 fiddling with muting and unmuting the line. So if the air
18 pollution control district and County of Imperial
19 representative could you introduce yourself again, please.

20 MS. GONZALEZ: Good morning this is Rosario
21 Gonzalez from the county counsel's office for the county
22 of Imperial.

23 PRESIDING MEMBER DOUGLAS: Thank you. And are
24 you also representing the Imperial County Air Pollution
25 Control District?

1 MS. GONZALEZ: That's correct.

2 PRESIDING MEMBER DOUGLAS: Thank you. Is anybody
3 on the line from the Imperial Irrigation District?

4 Is there anybody on the line or in the room
5 representing other federal, State, or local agencies?

6 Okay. The Public Adviser is in the room,
7 Jennifer Jennings. So she's raising her hand, for those
8 of you who can see her. She'll be available to assist
9 members of the public who are interested in following this
10 process and potentially participating in this process.

11 With that, I'll turn this over to the hearing
12 officer Ken Celli.

13 HEARING OFFICER CELLI: Morning, everyone. The
14 Committee noticed today's evidentiary hearing in the
15 Notice of Prehearing Conference and Evidentiary Hearing
16 issued on August 19th, 2011. On June 30th, 2011, the
17 complainant, CURE, which is California Unions for Reliable
18 Energy, filed a verified complaint and a request for
19 investigation, which we will refer to as the complaint,
20 hereinafter, requesting the California Energy Commission
21 investigate whether Ormat Nevada, Inc. or Ormat has
22 violated Public Resources Code section 25500 by
23 circumventing the Commission's jurisdiction over Ormat's
24 existing North Brawley Geothermal Development, or North
25 Brawley, and Ormat's proposed East Brawley Geothermal

1 Development also known as East Brawley.

2 CURE alleges that both North Brawley and East
3 Brawley have a net generating capacity of over 50
4 megawatts. CURE also alleges that Ormat's North and East
5 Brawley developments are not distinct facilities operating
6 under the 50 megawatt jurisdictional threshold, but are
7 instead one facility with a combined generating capacity
8 of over 50 megawatts, so that they would together be
9 greater than the 50 megawatt jurisdictional threshold and
10 thus would be subject to the Commission's licensing
11 authority.

12 CURE provides as support to their complaint a
13 California Public Utilities Commission or CPUC resolution
14 authorizing a Power Purchase Agreement between Southern
15 California Edison and Ormat for the sale of 50 megawatts
16 from the North Brawley facility and an option to sell an
17 additional 50 megawatts from the East Brawley facility.

18 CURE also alleges that the North Brawley and East
19 Brawley facilities are not distinct units but are a single
20 facility because they will function as interdependent and
21 physically interconnected generation units.

22 CURE further alleges that both facilities will
23 share transmission and water supply infrastructure, which
24 will be developed and owned by Ormat Nevada, Inc. on
25 adjoining parcels which are leased or owned by Ormat

1 Nevada, Inc.

2 The complaint requests the following relief:

3 One, immediately commence an investigation of
4 Ormat for the purpose of a jurisdictional determination
5 regarding the North Brawley and East Brawley facilities.

6 Two, immediately commence an investigation to
7 determine the nature and extent of any violations by
8 Ormat.

9 Three, request the Attorney General to petition
10 for an injunction of any ongoing licensing and
11 construction activities relating to the North Brawley and
12 East Brawley facilities.

13 Four, find that North Brawley and East Brawley
14 are individually and collectively subject to the
15 Commission's licensing jurisdiction under Warren Alquist
16 Act.

17 Five, take any other action necessary and
18 appropriate under the Commission's statutory and
19 regulatory authority to assume licensing jurisdiction of
20 the North Brawley and East Brawley projects.

21 Six, take any other action necessary and
22 appropriate under the Commission's statutory and
23 regulatory authority to prevent any further violation by
24 Ormat and to remedy any and all adverse impacts to the
25 public health and safety and welfare and the environment

1 resulting from this violation, if any.

2 Seven, serve a copy of this complaint on Ormat,
3 provide a notice of the complaint and future investigatory
4 proceedings to petitioners, respondents, and all entities
5 identified in this complaint, schedule any necessary
6 hearings and take additional steps to notify other
7 individuals, organizations, and businesses, which the
8 Committee or the Chairman has reason to believe would be
9 or adverse -- has reason to believe would be adversely
10 affected by a decision.

11 And I just want to say for the record that I
12 think at the prehearing conference we established that all
13 of the parties believed that the people noticed in the
14 current proof of service is the sum total of everybody who
15 needs to be notified. And I see shaking heads, is that
16 correct from CURE please?

17 MS. KLEBANER: Yes, that's correct.

18 HEARING OFFICER CELLI: Thank you.

19 On August 30th, 2011 respondent Ormat Nevada,
20 Inc. filed a verified answer denying the allegations to
21 CURE's complaint and a motion to dismiss, alleging that
22 CURE's complaint fails to State an actionable claim in
23 asserting the defense of laches.

24 The Chairman of the Energy Commission found that
25 there was good cause to set the matter for hearing on the

1 complaint in the July 26th, 2011 order which also required
2 Energy Commission staff to prepare an assessment of the
3 complaint and the answer.

4 The matter was assigned to a committee consisting
5 of Karen Douglas presiding and Chairman Bob Weisenmiller
6 as associate on August 10th, 2011, which at the same time
7 I was also assigned as hearing officer.

8 On September 26th, 2011, staff filed an
9 assessment of the complaint and answer and all parties
10 have filed prehearing statements that included witness and
11 exhibits lists.

12 Now the purpose of today's conference is to
13 conduct a hearing and receive evidence on the complaint
14 pursuant to California Code of Regulations Title 20,
15 section 1231. CURE has the burden of proving the
16 allegations at North Brawley and East Brawley facilities
17 are subject to Energy Commission jurisdiction by a
18 preponderance of the evidence.

19 And we will proceed as follows:

20 The complainant, CURE, will submit its direct
21 evidence that Ormat Nevada, Inc.'s North and East Brawley
22 projects fall within the jurisdiction of the California
23 Energy Commission for the reasons listed in their
24 complaint.

25 The parties will cross-examine CURE's witnesses

1 in the order of respondent, then staff, then intervenor.
2 And at the close of CURE's case in chief, the respondent
3 Ormat may then put on its direct and rebuttal evidence
4 calling witnesses as a panel who will then be
5 cross-examined by staff, intervenor, and then CURE.

6 At the close of Ormat's evidence, staff will put
7 on their direct evidence followed by cross-examination by
8 the other parties.

9 At the close of staff's evidence, intervenor
10 Imperial County will put on their evidence, followed by
11 cross-examination by the other parties.

12 The complainants will then have the right to
13 proffer rebuttal evidence again subject to
14 cross-examination.

15 At the close of the evidence, we will then
16 provide an opportunity for general public comment. As
17 agreed at the prehearing conference on September 19th,
18 2011, pursuant to Government Code section 1145.10 et seq,
19 and section 1217 of the Commission's regulations, the
20 Committee may conduct portions of the evidentiary hearing
21 in an informal manner. However, the parties and their
22 witnesses are admonished that during cross-examination,
23 only the witness called upon by the cross-examiner may
24 speak and the other panelists are forbidden from speaking
25 to each other until after the cross-examination is

1 completed.

2 And I'm saying this because I want to be really
3 clear with everyone that we're not going to allow any
4 cross talk when a panel is up here, other than who gets
5 the microphone and that kind of thing. So we're going to
6 ask that you watch that and admonish your witnesses
7 accordingly.

8 As to any request for official notice the
9 Committee is pleased to take official notice of all
10 relevant laws, rules, and regulations and facts, which are
11 so universally known that they cannot reasonably be the
12 subject of dispute. For example, today is Monday. We
13 would take official notice that today is Monday.

14 Today's agenda would roughly follow the following
15 schedule:

16 We, for the record, started on time at 9:30, I'm
17 happy to say. Hopefully between 9:30 and 11:00, we will
18 take care of -- we've already handled the introductions.
19 We'll take care of motions and procedures.

20 CURE will then put on its case in chief. They've
21 two witnesses. And then at noon, somewhere between noon
22 and 12:30 we're going to have, what I'm calling, a working
23 lunch. We'll take a break. You can all run upstairs to
24 the Rendezvous on the second floor, which is our in-house
25 deli and get whatever there is available to get.

1 And then we would begin again people -- there's
2 no problem with people eating at counsel table and on the
3 dais. But we want to keep moving. And so we figure by
4 12:30 Ormat Nevada, Inc.'s panel would take the stand. At
5 1:30 we would hear from staff's panel, followed by at 2:30
6 Imperial County's panel, followed at 3:30 by CURE's
7 rebuttal case.

8 So by 4 o'clock I'm hoping, and those of you who
9 are members of the public, I'm just going to check in
10 quickly to make sure that we're still on the air. Yes, we
11 are. So any members of the public wishing to make a
12 comment to the Committee can do so at a round 4 o'clock.
13 Basically at the close of the evidence.

14 At 5 o'clock we should adjourn. If we can finish
15 the hearing today, the parties will submit opening briefs,
16 which will be due before noon on October 12th, 2011, which
17 I might add was Columbus Day, the day that a person sailed
18 from Genoa and discovered America. But that's not a big
19 deal anymore, because it's not even a State holiday. So
20 we will be open and we will be receiving everybody's
21 opening briefs on October 12th, 2011. Rebuttal briefs
22 will be due no later than noon on October 19th, 2011, also
23 not a holiday.

24 Pursuant to a stipulation entered into the record
25 on September 19th, 2011, the Committee will issue a

1 proposed decision setting out its recommendations to the
2 full Commission 21 days after the rebuttal briefs are
3 filed, which if we can finish today, would be November 9,
4 2011.

5 The Energy Commission will -- the full Commission
6 will prepare a decision within 21 days of the filing of
7 the Committee's proposed decision, which by my
8 calculation, would take us to the November 30th, 2011
9 business meeting. And that is pursuant to California Code
10 of Regulations Title 20, section 1235 and 1236.

11 Now, before we begin, I just want to inquire, and
12 I'm going to inquire of CURE, whether the parties were
13 able to resolve any matters in workshops and do you wish
14 to submit any stipulations.

15 Go ahead, Mr. Ellison is motioning.

16 MR. ELLISON: Thank you, Hearing Officer Celli.
17 Just one comment about the schedule that you just
18 described. Our understanding at the prehearing conference
19 was that our presentation would be from 12:30 until 2:00
20 rather than 12:30 to 1:30.

21 HEARING OFFICER CELLI: Let me go back to that.
22 12:30 -- I had to insert staff's panel as you may recall.
23 And I really don't know that they're going to take up that
24 much time. This is sort of elastic. I think we might
25 even be able to get on you before 12:30, because if CURE

1 starts sooner than 11 o'clock, then we certainly should be
2 able to finish them off maybe -- and you could start even
3 before we get to lunch.

4 MR. ELLISON: That's fine. And we certainly are
5 prepared to move as quickly as possible.

6 HEARING OFFICER CELLI: Right. The schedule is
7 subordinate to the parties' needs. So basically I'm going
8 to do everything I can to take the evidence in. I'm not
9 going to be cutting people off, because it's 1:30. So
10 this is generally what we think the schedule will do.

11 So Ms. Klebaner or Ms. Gullessarian, who's going
12 to be running the show today, if I may ask.

13 MS. KLEBANER: Ms. Klebaner will be running the
14 show.

15 (Laughter.)

16 HEARING OFFICER CELLI: Okay. So I'm asking
17 whether you have any stipulations you were able to
18 make -- resolve anything through workshops.

19 MS. KLEBANER: Yes. During the workshop on
20 September 2nd the parties were able to stipulate to enter
21 in exhibits. CURE -- the parties -- CURE obtained a
22 stipulation from the parties to enter in Exhibits 1
23 through 49.

24 HEARING OFFICER CELLI: Okay.

25 MS. KLEBANER: Because we had not yet identified

1 Exhibits 50 through 51.

2 HEARING OFFICER CELLI: Right. And you
3 should -- actually in a moment we'll start the hearing and
4 then we'll identify what those are.

5 MS. KLEBANER: Okay.

6 HEARING OFFICER CELLI: So there was -- 1 through
7 49 were stipulated to be received but 50 through 51 had
8 yet to be --

9 MS. KLEBANER: 50 through 51 have yet to be
10 discussed.

11 HEARING OFFICER CELLI: Identified. Okay.

12 MS. KLEBANER: And there were further
13 stipulations at which I could address with respect to the
14 other parties' exhibits if you would like me to do that?

15 HEARING OFFICER CELLI: Certainly.

16 MS. KLEBANER: A parties to greed to stipulate to
17 enter in respondent's exhibits 200 through 2005 -- or 205.

18 HEARING OFFICER CELLI: Okay.

19 MS. POTTENGER: Oh, I believe it was 2000 -- or
20 206.

21 MS. KLEBANER: 206?

22 HEARING OFFICER CELLI: 206.

23 MS. KLEBANER: Let me just verify that. Yes
24 that's correct, 200 through 206. The parties also agreed
25 to stipulate to enter staff's exhibits, which number 300

1 through 302.

2 HEARING OFFICER CELLI: Oh, I have 300 through
3 301. What was 302, Mr. Ogata?

4 STAFF COUNSEL OGATA: Jeff Ogata, staff counsel.
5 302 is going to be the resumes of the witnesses.

6 HEARING OFFICER CELLI: Thank you. Go ahead, Ms.
7 Klebaner.

8 MS. KLEBANER: Thank you. And inn intervenor's
9 Exhibit 400.

10 HEARING OFFICER CELLI: Which we did receive.
11 Those were resumes as well.

12 Okay. Any further stipulations or resolutions of
13 issues?

14 MS. KLEBANER: No. Thank you.

15 HEARING OFFICER CELLI: Thank you.

16 MS. POTTENGER: Hearing Officer Celli, may I?

17 HEARING OFFICER CELLI: Yes, Ms. Pottenger.

18 MS. POTTENGER: While respondent appreciates
19 parties' agreement is to stipulate to the admission of all
20 of our exhibits, respondent, at this time, will not be
21 putting confidential exhibits 203 and 204 into the record.
22 We believe that there will be sufficient information
23 coming out through testimony that those exhibits will not
24 be needed at this time.

25 HEARING OFFICER CELLI: Okay. Well, we'll see

1 how it unfolds and then we'll deal with it as it comes up.

2 Any motions -- first from complainant, any
3 motions in limine at this time?

4 MS. KLEBANER: Not at this time. Thank you.

5 HEARING OFFICER CELLI: Okay. Thank you.
6 Respondent Ormat Nevada, Inc., any motions in limine?

7 You're going the need to bend that thing. Yes.
8 Speak right into the microphone please.

9 MR. ELLISON: Not at this time, no. We reserve
10 the right based on testimony we haven't yet heard to make
11 other motions, but no, not at this time.

12 HEARING OFFICER CELLI: Thank you. Any motions
13 from staff?

14 STAFF COUNSEL OGATA: Jeff Ogata, staff counsel.
15 No.

16 HEARING OFFICER CELLI: Any motions from
17 intervenor County of Imperial?

18 MR. WILKINS: Howard Wilkins, County of Imperial.
19 No motions for the county.

20 HEARING OFFICER CELLI: Thank you. Very good.
21 Then we can begin our hearing directly. Complainant has
22 the burden of proof. So complainant will call the first
23 witness.

24 What I'm thinking of doing is since we have a
25 stipulation on evidence, I might just receive the evidence

1 that has been stipulated to now. So we to take up time
2 with that while there's a witness on the stand. Mr.
3 Ellison you have a question.

4 MR. ELLISON: I do. As I requested last week, we
5 would like the make a brief opening statement before we
6 have the witnesses.

7 HEARING OFFICER CELLI: That's right. And you
8 know I think the way I would like to proceed, the
9 Committee is interested in opening statements. I want the
10 remind all of the parties that an opening statement is not
11 argument. It's simply an opportunity to present to the
12 Committee what you think the evidence will prove, so that
13 we can have a context for the evidence as it comes in.

14 I'm going to -- since CURE has the burden, I'd
15 ask CURE to go forward first with an opening statement
16 please, if you have one.

17 MS. KLEBANER: Yes. CURE would like an
18 opportunity and will make an opening statement.

19 We would also like to obtain a stipulation from
20 the parties to move exhibits 50 and 51 into the record.

21 HEARING OFFICER CELLI: You know, before you do,
22 let's just put -- I want to put that on hold. And the
23 reason I want to do that is because you have so many
24 exhibits and some of them are voluminous and I'm going to
25 need you to tell me what's relevant and what page and that

1 sort of thing. I don't think I'm going to need that from
2 the other parties, but I will need that from CURE, just
3 because I need to be focused into what it is we're looking
4 at.

5 So I think what we should do first, let's take
6 the opening statements. Then we'll open the record to
7 evidence, and then we'll deal with your evidence.

8 Okay. Go ahead.

9 MS. KLEBANER: Okay. That's fine.

10 CURE would like to begin by thank the Committee
11 for providing us with an opportunity to adjudicate this
12 complaint and request for investigation. In this
13 proceeding, the Committee must determine whether the East
14 Brawley and North Brawley Geothermal Projects are subject
15 to the California Energy Commission jurisdiction pursuant
16 to section 25500 of the Warren Alquist Act, either as one
17 facility or as thermal power plants each with a net
18 generating capacity of 50 megawatts or more.

19 The evidence shows, first, that the power plants
20 were planned as a coordinated larger project. At least as
21 early as April 2007, Ormat set out to develop and sell 50
22 and up to 100 megawatts of generation in North Brawley.
23 In negotiations with Southern California Edison, Ormat
24 represented that the geothermal resources it had secured
25 in North Brawley would be able to sustain at least a 50

1 megawatt facility and would likely produce adequate supply
2 to sell 100 megawatts.

3 In June 2007, Ormat entered into a Power Purchase
4 Agreement with SCE for the sale of 50 megawatts with the
5 option the increase sales to 100. Six months later in
6 December 2007, Ormat funded the preparation of a System
7 Impact Study for a proposed North Brawley 150 megawatt
8 generation project.

9 HEARING OFFICER CELLI: Can I -- I'm sorry to
10 interrupt, but are you going the tie this into the exhibit
11 numbers as you go, so that I know --

12 MS. KLEBANER: Sure.

13 HEARING OFFICER CELLI: For instance, you
14 said -- yeah. Go ahead.

15 MS. KLEBANER: I could do that.

16 HEARING OFFICER CELLI: It would be good for us
17 to know. Okay according to Exhibit X, where the statement
18 can be found.

19 MS. KLEBANER: For the statement that at least as
20 early as April 2007, Ormat set out to develop and sell 50
21 and up to 100 megawatts of generation in North Brawley, I
22 would refer you to Exhibit 1, Attachment C page seven.
23 Exhibit 15 and Exhibit 39.

24 For the statement that Ormat represented to SCE
25 that there would be adequate geothermal resource to supply

1 50 and up to 100 megawatts in North Brawley, I would
2 direct you to Exhibit 1, Attachment C, page 13; Exhibit
3 39, page 13.

4 For the statement that in June 2007 Ormat entered
5 into a Power Purchase Agreement with SCE for the sale of
6 50 megawatts with the option to increase sales to 100, I
7 would point you to respondent's confidential Exhibit 203.

8 For the statement that six months later in
9 December 2007 Ormat funded the preparation of a system
10 impact study for a proposed quote North Brawley 150
11 megawatt generation project end quote, I would point you
12 to Exhibit 201, Exhibit 1 Attachment A, and complainant's
13 Exhibit 29.

14 For statement -- oh, Ormat admits that this one
15 study evaluates both the North Brawley and East Brawley
16 projects, I would refer you to respondent's Exhibit 205.

17 I will continue with my opening statement. I
18 think I've got us up to speed.

19 HEARING OFFICER CELLI: As you roll, keep us up
20 informed as to what exhibit attaches to what you're
21 talking about.

22 MS. KLEBANER: I will do.

23 On December 13th, 2007, Ormat submitted an
24 interconnection request to the Imperial Irrigation
25 District for the generating facility evaluated in the

1 December 2007 System Impact Study. That information is in
2 Exhibit 1, Attachment B, Exhibit 26 as well.

3 As late as January 2010, Ormat continued to
4 believe that it could sell up to 50 megawatts of
5 additional generation from the East Brawley project to
6 SCE, Southern California Edison, pursuant to its exhibit
7 existing Power Purchase Agreement. That information is
8 contained in Exhibit 1 Attachment J, Exhibit 19 page 26
9 through 27 and 28.

10 The evidence also shows that in significant ways
11 the East and North Brawley projects do or could share
12 common facilities. The East Brawley and North Brawley
13 projects can be operated from the same control room. This
14 information is available in staff's exhibit 4 -- one
15 moment

16 HEARING OFFICER CELLI: Staff's would be 300,
17 301, or 302.

18 MS. KLEBANER: Thank you. 301.

19 That both projects will interconnect to Imperial
20 Irrigation District's grid at the North Brawley
21 substation, which is owned by Ormat. That information is
22 available in complainant's Exhibit 1.

23 As of January 2010, Ormat planned to run a
24 pipeline for cooling tower makeup water across the the new
25 river from East Brawley toward the North Brawley project.

1 Support for that statement can in complainant's Exhibit 1,
2 as well as complainant's Exhibit 19.

3 The evidence shows that the projects are in a
4 common location, while Ormat proposes to site the East
5 Brawley plant about a mile and a quarter from the North
6 Brawley Plant. I believe that statement is undisputed.
7 The power plants themselves are separated only by a
8 geothermal field that is owned or leased by Ormat for the
9 two power plants.

10 The new river crosses the geothermal field, but
11 does not and will not separate the geothermal projects.
12 This is because Ormat has received county authorization to
13 extend geothermal piping across the new river to the east.
14 That information is provided in complainant's Exhibit 1
15 Attachment F and Exhibit 7, as well as Exhibit 1
16 Attachment E and Exhibit 33.

17 And Ormat presently seeks to extend geothermal
18 piping, a cooling water pipeline, and cables from the
19 proposed East Brawley facility across the new river to the
20 west. This information is supported by Exhibit 1, Exhibit
21 19.

22 Finally, it is undisputed that both projects and
23 their respective geothermal fields are under common
24 ownership, design and control by a single entity, Ormat.

25 With respect to whether the individual facilities

1 are subject to the Commission's jurisdiction under section
2 25500, CURE will show that through exhibits and testimony
3 today that even using staff and Ormat's numbers, which
4 show that for five generators the projects would generate
5 49.5 megawatts each, the North Brawley permit and the East
6 Brawley application, which are for six generators, are
7 clearly over 50 megawatts.

8 CURE's testimony will also show that the
9 generating capacity of each plant is 50 megawatts or more,
10 because the maximum gross rating of each plant less its
11 auxiliary load nets out to 50 megawatts or above. CURE
12 also points the Committee to Exhibit 1 for support for
13 that statement, as well as Exhibits 203 and 204, as well
14 as respondent's Exhibit 200, Appendix D.

15 That concludes CURE's opening statement.

16 HEARING OFFICER CELLI: Thank you. Ormat, did
17 you wish to make an opening statement. That would be
18 respondent Ormat Nevada, Inc.?

19 MR. ELLISON: We do. Thank you, Hearing Officer
20 Celli, Commissioners, advisors.

21 My name the Christopher Ellison I'm here on
22 behalf of the respondent, Ormat Nevada, Inc.. I can begin
23 on a bit of a personal note. I have had the opportunity
24 to sit where Mr. Ogata is sitting and the represent the
25 staff. I've had the opportunity to sit where Ms. Allen is

1 sitting and be advisor to the Chairman and sit at the dais
2 at the Energy Commission. I have had the opportunity
3 actually the even represent a union in a permitting
4 proceeding. Albeit one where jobs were directly at stake.
5 And I've been practicing in front of or on behalf of the
6 Energy Commission almost since its birth, since 1978.

7 I say that to put in context the following
8 statement this proceeding. There's a lot of déjà vu in
9 these proceedings, I have to say, these licensing
10 proceedings in particular.

11 But this proceeding has the potential to be one
12 of the most ironic and unique proceedings that I think
13 I've been involved in in my career. And I say ironic for
14 two reasons. The first is substantively, it is ironic
15 because my client is summoned here to appear before you
16 charged with illegal activity for developing a single
17 project of 150 megawatts, when the evidence will show that
18 they have built one project that is struggling to get over
19 30 megawatts. They would love to get more power from that
20 project. But the steam field, or I should say the brine
21 field. These are not steam geothermal projects at the
22 present time and based on capacity tests that have been
23 incorporated into the power sales agreement, cannot do
24 anymore than that.

25 The East Brawley project suffers from the same

1 effects. And we are -- our panel will discuss all of
2 that. This is not a close call substantively. By the end
3 of this hearing when you take all of the evidence, you
4 will realize that CURE's case is based upon statements
5 that are either out of date, taken out of context, or
6 refer to megawatt numbers that are measured differently
7 than the Energy Commission's capacity generating
8 measurement tests under section 2003 of its regulations.

9 The reality is that these projects are entirely
10 separate projects. They share no facilities. And let me
11 repeat that. They share no facilities. They have been
12 developed on entirely different timelines. They are at
13 least three years apart, if not more. And they are
14 located proximate to one other simply because all
15 geothermal projects in the same KGRE have to be located at
16 the geothermal field. That's where the resource is.

17 These are separate projects. They are under 50
18 megawatts. Your staff has looked at these issues
19 independently and come to that conclusion. Imperial
20 County has looked at those issues independently and come
21 to that conclusion. This is not a close case. In fact,
22 it's a very ironic case substantively.

23 It is also, however, ironic from my point of view
24 procedurally and that's what I want to talk to you about
25 next, a real concern about this proceeding, and it is that

1 if the Commission proceeds in a sort of business as usual
2 fashion, that it will deny my client fundamental due
3 process rights and set a precedent that will encourage
4 frivolous complaints in the future that the Commission
5 will come to regret.

6 I think there are two fundamental issues in this
7 proceeding. One of them is are these projects
8 jurisdictional? Is answer to that is no. And I think
9 you'll come to that conclusion relatively easily. The
10 more fundamental question in this proceeding is what is
11 the standard that this decision is going to set for future
12 complaint applications? To what extent is the Commission
13 going to allow a party to throw a complaint over the
14 transom, then engage in discovery to develop its case,
15 bring a outside party before the Commission against itself
16 will, for them to expend money and time defending claims,
17 which are not true.

18 Those kinds of things cannot be remedied by a
19 decision in favor of respondent. I think we all know why
20 we're here. I happen to run into your former general
21 counsel at the WECC Board meeting last week, and I
22 mentioned to him I was in a hearing with CURE today. And
23 he looked at me and he laughed and he said, "Let me guess.
24 Ormat doesn't have a Project Labor Agreement". That's why
25 we're here.

1 This proceeding is about delay. It's about
2 imposing costs and risks on Ormat.

3 HEARING OFFICER CELLI: I think we're getting
4 into argument here. I'd rather you just kept it to the
5 evidence, please.

6 MR. ELLISON: Fine. I think the Commission has
7 an obligation to obviously hear this complaint, but I
8 think it also has an obligation not to be blind to the
9 practical consequences of its decisions.

10 With respect to why do I raise this? I raise
11 this to urge you as you consider the evidence to keep in
12 mind very fundamental due process issues here. The first
13 is that CURE has the burden of proof as Hearing Officer
14 Celli has already said. This is not a licensing
15 proceeding. CURE is not an intervenor.

16 They are, if you will, the applicant in this
17 proceeding. In fact, a better analogy is they are the
18 prosecutor in a somewhat -- something akin to a criminal
19 trial. This is a formal adjudicatory proceeding under the
20 law. Licensing proceedings are quasi-adjudicatory
21 proceedings.

22 CURE has the burden of proof. They also have the
23 burden of putting other parties on notice of what their
24 case is, so that we can prepare a defense. And I have to
25 tell you up to this point, the discovery that we've been

1 engaged in has been CURE questioning Ormat about the
2 operation of its facilities, not the other way around. So
3 far we've proceeded in what I consider to be a completely
4 backwards fashion on this case. And I'm quite concerned
5 that CURE will not be held to its complaint but rather
6 will be allowed to surprise us. And remember we don't
7 have pre-filed testimony here to either not support claims
8 in its complaint that were used to defeat a motion to
9 dismiss. Or alternatively to present new claims that were
10 not in the complaint in the first place. Both of those
11 would be a denial of due process.

12 So finally, let me leave you with a couple of
13 guideposts substantively and then I'll conclude. One, 50
14 megawatts is different in different contexts. Fifty
15 megawatts is measured differently for the purposes of a
16 Power Purchase Agreement than it is for the purposes of
17 determining the Energy Commission's jurisdiction, for
18 example.

19 Secondly, the Commission's rules require that a
20 facility's capacity be assessed at its maximum rated
21 capacity, making certain assumptions dictated by those
22 rules. It's the maximum rated capacity. That means, for
23 example, if you have performance guarantees on equipment,
24 you're running them up to but not beyond those performance
25 guarantees. I suspect that some of the testimony you may

1 here today suggests that these plants could generate more,
2 if they were run beyond their design capability.

3 You will hear evidence today as to why Ormat
4 cannot physically do that, but you will also hear evidence
5 as to why it would be completely imprudent for them to do
6 that.

7 Finally, let me leave you with this final fact.
8 CURE has permit limitations from the county and from the
9 APCD that limit it to 49.9 megawatts as a matter of law in
10 the operation of these projects. And you will hear, I
11 think, that those permit limits are measured the same way
12 that the Energy Commission measures.

13 HEARING OFFICER CELLI: Just be to clear, I
14 believe you just said CURE has limits --

15 MR. ELLISON: I'm sorry, the County.

16 HEARING OFFICER CELLI: Thank you.

17 MR. ELLISON: Excuse me. The County has permit
18 limits.

19 HEARING OFFICER CELLI: You should probably start
20 that thought again.

21 MR. ELLISON: Let me repeat that thought, because
22 it's important, okay. The county has imposed permit
23 limits both through the APCD and through the conditional
24 use permit, that enforce the Commission's jurisdiction
25 that say that these projects cannot generate more than

1 49.9 megawatts.

2 HEARING OFFICER CELLI: And what exhibit is that,
3 if you just know off.

4 MR. ELLISON: Off the top of my head, I don't
5 know, but we'll present that.

6 And I'm sure that there will be testimony to
7 support that as well. So the bottom line is you have
8 projects here that lack the resource to come anywhere near
9 50 megawatts, that are subject to permit limitations that
10 would make them illegal to go over 50 megawatts. And we
11 will then go on to address all of the other things you've
12 heard about common facilities. There are none and about
13 the various documents that you've heard about.

14 Thank you very much.

15 HEARING OFFICER CELLI: Thank you.

16 Staff, did you wish to make an opening statement?

17 STAFF COUNSEL OGATA: Thank you, Mr. Celli.

18 We'll waive opening statement.

19 HEARING OFFICER CELLI: Thank you.

20 Mr. Wilkins.

21 MR. WILKINS: Yes.

22 HEARING OFFICER CELLI: I'm sorry.

23 MR. WILKINS: Would you like me to take the dais.

24 HEARING OFFICER CELLI: Whenever your preference
25 is, is fine.

1 MR. WILKINS: It's easier here. Thank you.

2 Good morning, Hearing Officer Celli,
3 Commissioners, advisors. My name the Howard Wilkins and I
4 represent intervenor Imperial County. I will be calling
5 two witnesses today. And their testimony will show the
6 following:

7 First, the Imperial County has been involved in
8 the review and processing geothermal exploratory and
9 production projects since the late 1960's. The county has
10 worked with the Commission over the last 4 decades to
11 develop these resources. In fact, the CEC funded the
12 county's revisions to its geothermal element in 1984 and
13 85.

14 Since that time, the county's geothermal element
15 has been revised five times most recently in 2006. The
16 2006 geothermal alternative energy and transmission
17 element was found to be consistent with California law by
18 the State, because the county's policies included in the
19 element are consistent with those of this Commission.

20 Regarding the county's review of the projects at
21 issue in this matter, the county initially prepared a
22 master EIR for geothermal projects in the North Brawley
23 area in 1979. The 1979 master EIR anticipated multiple
24 geothermal projects within this area, including the north
25 and East Brawley projects at issue here.

1 The county approved the 49 megawatt North Brawley
2 binary power plant at issue this this matter in November
3 of 2007 based on a Mitigated Negative Declaration. That
4 Mitigated Negative Declaration is conclusively presumed to
5 comply with CEQA pursuant to CEQA guidelines section
6 15231.

7 As part of that environmental review, the county
8 determined in its environmental review and permitting
9 process that the per power plant generates less than a
10 maximum net output of 50 megawatts.

11 Further, the county including a condition of
12 approval in the CUP for the North Brawley power plant to
13 ensure it generates a maximum net output of less than 50
14 megawatts. That condition of approval can be found in
15 respondent's Exhibit 200 and Appendix D on page four.

16 Regarding the East Brawley power plant
17 application, the county's testimony will show that they've
18 spent an enormous amount of time and effort to date
19 reviewing the proposed project.

20 The CUP application was received over three years
21 ago in August of 2008. At the county's environmental
22 evaluation committee meeting in December of 2009, the EEC
23 recommended preparing an EIR for project, rather than an
24 MND as was originally proposed.

25 A county's testimony will further demonstrate

1 that counsel for CURE was aware of and has been involved
2 in the county's environmental review process for the East
3 Brawley project for over two years now. The county has
4 received numerous comments from CURE over this period
5 including a 30 three-page comment letter on the Draft EIR.

6 Finally, in preparing the final EIR for the East
7 Brawley project, the county has drafted responses to
8 comments regarding the aggregation issues, which is
9 commission is hearing today. County staff has determined
10 that the North and East Brawley power plants are not
11 interdependent on one another and that both plants have
12 independent utility as that term is defined under CEQA.

13 The county will also testimony that if a permit
14 is issued for the East Brawley power plant, they will
15 include a similar condition of approval as with North
16 Brawley to ensure that it does not generate more than 50
17 megawatts.

18 Turning to the potential remedy here. The county
19 will also testify that should the CEC find that it did not
20 have a authority to permit the North Brawley project, or
21 that it does not have authority to permit the East Brawley
22 project, it would set a precedent that would make it very
23 difficult for the county to attract the necessary
24 investment to develop a significant natural and indigenous
25 resources including geothermal projects.

1 In conclusion, the county concurs with CEC
2 staff's initial determination regarding the projects and
3 requests the Commission reject CURE's complaint and
4 request for investigation.

5 Thank you.

6 HEARING OFFICER CELLI: Thank you, Mr. Wilkins.

7 With that, we've heard from all of the parties.

8 One moment we're going the go off the record.

9 (Thereupon a discussion occurred off the record.)

10 HEARING OFFICER CELLI: Thank you. We're back on
11 the record. With that, let's commence the hearing.

12 CURE, please call your first witness. Or no
13 before you do, let's talk about your exhibits. I have
14 received and I mean physically not received into evidence,
15 but we have Exhibits 1 through 49 and then there was
16 Exhibits 50 and 51. Were there any others.

17 MS. KLEBANER: No. That would be it, 1 through
18 51. And we have hard copy and electronic versions of
19 those to distribute today.

20 HEARING OFFICER CELLI: Thank you. And can you
21 just give me a description of what 50 and 51 are?

22 MS. KLEBANER: Yes. Exhibit 51 is a letter from
23 Terrence O'Brien of the California Energy Commission to
24 Ormat, dated August 15th, 2011, regarding East Brawley
25 Geothermal Project generating capacity.

1 Exhibit 51 is a letter from Terrence O'Brien of
2 the California Energy Commission to Ormat dated August
3 15th, 2011 regarding North Brawley Geothermal Project
4 generating capacity.

5 HEARING OFFICER CELLI: The one -- are they the
6 same letter? One having to do with North Brawley, one
7 having to do with East Brawley?

8 MS. KLEBANER: That's correct. The first with
9 East Brawley, the second with North Brawley.

10 At this time, CURE would also reserve the right
11 to introduce other exhibits that may become necessary
12 during the course of today's hearing.

13 HEARING OFFICER CELLI: Can I ask you, since
14 everybody's already stipulated to at least 1 through 49, I
15 have some questions as I went through them that -- well,
16 you know what, maybe I'll hold off until you actually
17 start tying your testimony into some of these. Because a
18 lot of these I just couldn't see any relevance to. But if
19 the parties don't have a problem, we can receive them.

20 So with that, do you have a motion to introduce
21 your evidence?

22 MS. KLEBANER: Yes. I would like to move
23 Exhibits 1 through 51 into the record.

24 HEARING OFFICER CELLI: The motion is to move
25 Exhibits 1 through 51. Is there any objection from

1 respondent?

2 MS. POTTENGER: No objection. However,
3 respondent would object to the admission of any other
4 exhibits that we have not had a chance to review yet.

5 HEARING OFFICER CELLI: Okay. Well, I guess
6 we'll cross those bridges as they come.

7 Any objection from staff on Exhibits 1 through
8 51?

9 STAFF COUNSEL OGATA: No objections.

10 HEARING OFFICER CELLI: And any objection from
11 the County of Imperial?

12 MR. WILKINS: County of Imperial no objections.

13 HEARING OFFICER CELLI: Then, at this time,
14 exhibits 1 through 51 are received into evidence as
15 exhibits 1 through 51. I want to make note that Exhibit
16 23 is not an exhibit at all. It's just a place holder.
17 It's a blank. It's an omitted piece of evidence.
18 Everything else is as described in the exhibits list.
19 There is an exist list on the table out in front as you
20 came in the door this morning. And we sent the exhibits
21 list out to all of the parties, I believe, on Friday. And
22 I heard back from some of you for some additional
23 exhibits. But those are the descriptions that we will be
24 using for the record, okay.

25 Thank you.

1 (Thereupon Complainant's Exhibits 1 through 51
2 were marked for identification and received
3 into evidence.)

4 HEARING OFFICER CELLI: And you know what I'd
5 like to do is let me take in all of the evidence that's
6 been stipulated so far and then you can call your first
7 witness, CURE, if that's okay.

8 So Ormat, a motion as to your evidence please.

9 MS. POTTENGER: Respondent moves Exhibits 200,
10 201, 202, 205 and 206 into the record, please.

11 HEARING OFFICER CELLI: 201 -- 200, 201, 202 --

12 MS. POTTENGER: 205 and 206. And we'd like to
13 reserve the right the move 203 and 204 into the record, if
14 necessary, after --

15 HEARING OFFICER CELLI: Okay.

16 Any objection, CURE, to Exhibits 200, 201, 202,
17 205 and 206?

18 MS. KLEBANER: CURE has no objection.

19 HEARING OFFICER CELLI: Staff, any objection to
20 those exhibits?

21 STAFF COUNSEL OGATA: No objection.

22 HEARING OFFICER CELLI: Mr. Wilkins?

23 MR. WILKINS: No objections for County of
24 Imperial.

25 HEARING OFFICER CELLI: Thank you.

1 Then exhibits 200, 201, 202, 205 and 206 are
2 received.

3 (Thereupon Respondent's Exhibits 200, 201, 202
4 205 and 206 were marked for identification and
5 received into evidence.)

6 HEARING OFFICER CELLI: Staff, would you make a
7 motion on your exhibits, please.

8 STAFF COUNSEL OGATA: Thank you. Staff would
9 move exhibits numbers 300, 301 and 302 into the record.

10 (Thereupon a sound over the sound system.)

11 HEARING OFFICER CELLI: Let me fix that. All
12 right I think I got it.

13 Thank you. Staff's motion is for Exhibits 300
14 through 302. Any objection from CURE?

15 MS. KLEBANER: CURE has no objection.

16 HEARING OFFICER CELLI: Any objection from Ormat
17 Nevada, Inc.?

18 MS. POTTENGER: No objection.

19 HEARING OFFICER CELLI: Any objection from County
20 of Imperial?

21 MR. WILKINS: Intervenor, no objection.

22 HEARING OFFICER CELLI: Okay. Exhibits 300
23 through 302 will be received.

24 (Thereupon Staff's Exhibits 300 through 302
25 were marked for identification and received

1 into evidence.)

2 HEARING OFFICER CELLI: And finally intervenor
3 County of Imperial your motion, please.

4 MR. WILKINS: Intervenor would like to move
5 Exhibit 400 into the record.

6 HEARING OFFICER CELLI: Thank you. Any objection
7 from complainant, CURE?

8 MS. KLEBANER: CURE has no objection.

9 HEARING OFFICER CELLI: Respondent any objection?

10 MS. POTTENGER: Respondent has no objection.

11 HEARING OFFICER CELLI: Staff any objection?

12 STAFF COUNSEL OGATA: No objection.

13 HEARING OFFICER CELLI: Okay Imperial's Exhibit
14 400 is received into evidence.

15 (Thereupon Imperial County Exhibit 400 was marked
16 for identification and received into evidence.)

17 HEARING OFFICER CELLI: Thank you, everybody for
18 your stipulations and cooperation. That helps speed
19 things up.

20 Complainant CURE let's call your first witness,
21 please.

22 MS. KLEBANER: Actually, at this time, CURE would
23 like to stipulate to the qualifications of all of the
24 parties' witnesses.

25 HEARING OFFICER CELLI: Okay. Your two witnesses

1 are -- please state their names just for the record.

2 MS. KLEBANER: David Marcus and Robert Koppe.

3 HEARING OFFICER CELLI: Now, turning first to
4 respondent Ormat, did you receive the qualifications or CV
5 or resume regarding Mr. Marcus and Mr. Koppe?

6 MR. ELLISON: We did.

7 HEARING OFFICER CELLI: Any objection to
8 stipulating that they can testify as experts?

9 MR. ELLISON: Yes, we do object. And the reason
10 is we don't know what they're going to say.

11 HEARING OFFICER CELLI: Oh, I just meant their
12 qualifications.

13 MR. ELLISON: Well, we'll -- it depends qualified
14 for what? Qualified to say what. You know, the -- if
15 the -- until I know what they're going to say, I really
16 can't say that they are qualified as an expert to say it.

17 HEARING OFFICER CELLI: Okay. With that, we're
18 going to need you to lay a foundation for your experts
19 then.

20 MS. KLEBANER: Okay.

21 HEARING OFFICER CELLI: Now let me get on the
22 phone here. Are you going to have your witnesses testify
23 as a panel Ms. Klebaner or as individually?

24 MS. KLEBANER: We would like to proceed
25 individually first with the testimony of David Marcus

1 followed by the direct testimony of Robert Koppe.

2 HEARING OFFICER CELLI: Now let me just say that,
3 for the record, who's -- who I have on the phone is
4 Rosario Gonzalez, Mavis Scanlon, Mark Nero, Jared, no last
5 name, Gerry Beemis, Don Campbell, Dale no last name, and a
6 call in user number one. I'm going to unmute call in user
7 number one and inquire. On the toll phone call in user
8 number one I've unmuted are. Are you Mr. Koppe?

9 MR. KOPPE: I am Mr. Koppe. I'm not sure if I'm
10 caller user number one, but I am

11 HEARING OFFICER CELLI: Well I'm going to change
12 your designation from call in user number 1 to is it David
13 Koppe?

14 MR. KOPPE: Robert.

15 HEARING OFFICER CELLI: Robert Koppe. Thank you.
16 Let me -- just give me a moment here as I -- Robert,
17 K-o-p-p-e?

18 MR. KOPPE: Yes.

19 HEARING OFFICER CELLI: Okay. Now, the question
20 I had is to CURE, did you wish to call these witnesses as
21 a panel or you're just going the call them in turn, one
22 after the other?

23 MS. KLEBANER: We would like to call the
24 witnesses in turn.

25 HEARING OFFICER CELLI: Okay.

1 MS. KLEBANER: I would also, at this time, like
2 the flag that the testimony that will be given contains
3 information that is confidential pursuant to the
4 non-disclosure agreement that we entered into with
5 respondent.

6 HEARING OFFICER CELLI: Is there a way that we
7 can hold off on getting into that area until after we've
8 taken all of the non-confidential testimony?

9 MS. KLEBANER: I'm afraid that the testimony
10 wouldn't be particularly useful if broken up in that way.
11 You would have a very abbreviated statement.

12 HEARING OFFICER CELLI: What I'd like to do then
13 is just -- I'm going to leave Mr. Koppe -- you're going
14 to be unmuted Mr. Koppe. So I'm going to ask if you have
15 a dog or a small child nearby, that you shut the door and
16 keep it quiet. You might even want to mute your own phone
17 until it's time for us to call on.

18 MR. KOPPE: Okay.

19 HEARING OFFICER CELLI: But I wouldn't be muting
20 you from the podium. And then we're going to go after the
21 record for a moment for a brief conference.

22 (Thereupon a discussion occurred off the record.)

23 HEARING OFFICER CELLI: Okay, ladies and
24 gentlemen, part of this record involves what we think are
25 trade secrets or confidential material that's already

1 received as a designation as confidential from the
2 Executive Director. What we will end up having to do
3 is -- I also have to deal with the telephone as
4 well -- but what we would have to do is clear the room.
5 We would have to silence the phones. We would basically
6 have only the parties present. We would take the
7 testimony. We would have the court reporter mark the
8 testimony as confidential, so that that part which is
9 confidential would be excised from the public transcript
10 and only be available under seal.

11 And this is the only way I think we can protect
12 the confidential documents, unless the parties have other
13 ideas that we're not thinking of right now. Anything from
14 complainant or Ormat?

15 MS. KLEBANER: Elizabeth Klebaner for CURE, that
16 sounds fine to us.

17 HEARING OFFICER CELLI: Anything from respondent?
18 Any other safeguards you think we could put in? We put a
19 note at the door, that says the hearing is closed and then
20 remove it after we finished the confidential information.

21 MR. ELLISON: Those procedures are I think
22 appropriate. I would say the reason that we chose not to
23 submit the two exhibits that we excluded from our list was
24 to try to avoid this. Those are the confidential
25 exhibits. And depending upon when -- I'm afraid we do

1 have to engage in these procedures, but if at the close of
2 Mr. Marcus's testimony when we've actually heard what
3 portions of the confidential exhibits he has revealed, we
4 may -- I underscore may -- be able to remove any objection
5 to it being public, but we will have to reserve judgment
6 on that.

7 HEARING OFFICER CELLI: Okay. Thank you. Mr.
8 Ogata, any bright ideas coming from staff?

9 I'm just want to make sure that we preserve the
10 integrity of the proceedings and yet protect any secrets.
11 So anything else?

12 STAFF COUNSEL OGATA: No, Mr. Celli. No, I
13 think, you know, we don't do this very often, and I think
14 what you're proposing is appropriate. That's what we've
15 done in a few other times that I'm aware of.

16 Just for clarification, however, I do want to
17 point out. The Jared that you have on the phone there, is
18 Mr. Jared Babula, who's responsible for helping determine
19 whether or not application for confidentiality are granted
20 or not.

21 I'm informed by Mr. Babula, and you can confirm
22 if you want, because he's on the phone, that, in fact, the
23 applications have not been designated formally by the
24 Executive Director as confidential. However, those
25 documents still remain confidential during the time of

1 review. So just to be clear, because I think you
2 indicated that you thought they had been approved. My
3 understanding is that is not the case, but we still do
4 treat them as confidential pending that approval.

5 HEARING OFFICER CELLI: They're pending approval?

6 STAFF COUNSEL OGATA: That's correct.

7 HEARING OFFICER CELLI: Okay. So for our
8 purposes it's the same thing really.

9 STAFF COUNSEL OGATA: That's correct. I just
10 want to be sure that it was clear that, you know, as you
11 stated they have not been formally designated as
12 confidential by the Executive Director yet.

13 HEARING OFFICER CELLI: Thank you.

14 And anything from County of Imperial on this
15 question of confidentiality?

16 MR. WILKINS: Nothing.

17 HEARING OFFICER CELLI: Thank you.

18 MR. WILKINS: Thank you.

19 HEARING OFFICER CELLI: Okay. And so Ms.
20 Gullessarian or Ms. Klebaner you intend to launch right
21 into this confidential information first thing. So let's
22 do that and sort of get it out of the way, so that we can
23 let the people back in and turn the phones back on.

24 This is sort of a technical issue -- actually
25 it's not at all. All I have to do is mute the podium and

1 then I've got phones turned off. So what I'm going to do
2 quickly is -- and I'm going to stay on the record as I'm
3 describing what I'm doing. On our WebEx we have a
4 document that says are you listening to the evidentiary
5 hearing on the complaint against Ormat Nevada, Inc.
6 brought by California Unions for Reliable Energy. And I
7 am going to write in red on the page, it says the hearing
8 is closed during in camera proceedings.

9 MS. KLEBANER: Hearing Officer Celli, Robert
10 Koppe who's also on the line has executed the NDA
11 agreement and so he could remain on the line during the
12 confidential portion.

13 HEARING OFFICER CELLI: Okay. But the problem
14 now is that he won't be able to hear us, because I to have
15 mute the outgoing sound. So he'll -- unless perhaps can
16 you get him on your cell phone and he can hear -- get the
17 audio that way. There's no way I can limit the audio to
18 one participant. I have -- it's all or nothing here.

19 MS. KLEBANER: What if we instead of muting the
20 line, have persons that have not signed the N D.A. hang up
21 and then call back at a designated time?

22 HEARING OFFICER CELLI: Well, the problem I see
23 is that I've got -- you know, I've got the Public Adviser
24 here. Maybe, Ms. Jennings, you might want to have some
25 input on this. As you know, we are loathe to exclude the

1 public from participating in our proceedings. I
2 understand this is sort of an emergency situation. We're
3 going to have an in camera hearing and I'd like to limit
4 this as to time and information as much as we can.

5 I've got one, two, three, four, five, six,
6 seven -- seven people who are listening in on the
7 telephone and it's sort of impossible for me to call them
8 back and say, okay, you know in camera hearing is over,
9 it's time to get back on the phone and listen in. I can't
10 really do that.

11 PUBLIC ADVISER JENNINGS: Yes. I could. Our
12 office could do that if you'd like. And I understand from
13 Mr. Wheatland, Ormat's counsel also, that Energy
14 Commission staff was considered as having filed
15 non-disclosure agreements. That was in the discussion at
16 last week's workshop. Was that -- was he being specific
17 to me, because I had asked, but I don't know whether that
18 included other Energy Commission staff?

19 MS. POTTENGER: I believe Mr. Wheatland said that
20 as the Public Adviser's office, you'd be subject to the
21 same confidentiality provisions that other State agencies
22 employees are under.

23 HEARING OFFICER CELLI: The rules are binding on
24 staff certainly.

25 PUBLIC ADVISER JENNINGS: So if we could get the

1 phone numbers of the non-staff members. I don't know what
2 your response will be to the County of Imperial's county
3 counsel?

4 HEARING OFFICER CELLI: Well, I believe that
5 county of Imperial has already received this information,
6 is that accurate?

7 MR. WILKINS: I was at the workshop. I believe
8 that we stipulated -- I've stipulate to the NDA and am
9 willing to sign it as necessary.

10 HEARING OFFICER CELLI: Okay. Well --

11 PUBLIC ADVISER JENNINGS: And we have the county
12 counsel on the phone as well?

13 HEARING OFFICER CELLI: Right but she's
14 not -- county counsel is representing the county. So I'm
15 going to -- I would be hanging up on county counsel as
16 well.

17 PUBLIC ADVISER JENNINGS: Okay.

18 HEARING OFFICER CELLI: And I'm treating that
19 stipulation as a essentially all of the parties are
20 signatories to a non-disclosure agreement and we're giving
21 Ormat those rights under the NDA. So the people who are
22 on the phone, I have a -- I'm going to unmute. Dale?

23 Dale, you are unmuted. Can you hear me?

24 MR. EVENSON: I can.

25 HEARING OFFICER CELLI: Okay. Would you State a

1 phone number that the Public Adviser can call you back
2 with when we finished our in camera hearings.

3 MR. EVENSON: 760-393-3363.

4 HEARING OFFICER CELLI: Thank you. You're
5 welcome.

6 Dale, do you have --

7 MR. EVENSON: Evenson, E-v-e-n-s-o-n. I'm with
8 the County of Riverside.

9 HEARING OFFICER CELLI: Are you the fire chief?

10 MR. EVENSON: Not yet.

11 (Laughter.)

12 HEARING OFFICER CELLI: But you're in the fire
13 department, right?

14 MR. EVENSON: Correct.

15 HEARING OFFICER CELLI: I remember you from
16 before. Good to hear from you.

17 MR. EVENSON: Thank you.

18 HEARING OFFICER CELLI: Okay. With that I'm
19 going the mute Dale. And then Dale, go ahead and hang up.

20 Don Campbell, I'm going to unmute you.

21 PUBLIC ADVISER JENNINGS: Hearing Officer Celli
22 we might be able to avoid this if you give presentive
23 rights back to IT, and we could deal with that off line,
24 so you don't have to go through all this.

25 HEARING OFFICER CELLI: Well, but I -- is there

1 anyone here from IT?

2 I don't have nicked.

3 PUBLIC ADVISER JENNINGS: If you give it to Matt
4 Dowell, I would assume he'll be here today.

5 HEARING OFFICER CELLI: He's not here today.
6 He's on vacation.

7 PUBLIC ADVISER JENNINGS: Okay.

8 HEARING OFFICER CELLI: So let me just quickly, s
9 Don Campbell -- are you on the phone done?

10 MR. CAMPBELL: Yes, I am.

11 HEARING OFFICER CELLI: Did you wish to get a
12 call back when we resume the public portion of our
13 hearings?

14 MR. CAMPBELL: Yes.

15 PUBLIC ADVISER JENNINGS: Is he Ormat?

16 MR. CAMPBELL: If that's necessary.

17 MS. POTTENGER: He's Ormat. He's one of our --

18 HEARING OFFICER CELLI: There a number you want
19 us to call you back at?

20 MR. CAMPBELL: 775-815-9708.

21 HEARING OFFICER CELLI: Thank you. Very clear.
22 We got your number. And you can go ahead and hang up and
23 we'll call you when we're ready to resume.

24 MR. CAMPBELL: Thank you.

25 Gerry Beemis is with staff. And he's on the

1 headset anyway. I don't see that he's on the phone.
2 Gerry -- is it Gerry or Gary? It's G-e -- Gerry Beemis,
3 okay. Gerry, go ahead and hang up if you can hear us, if
4 you're listening. Sometimes people put on their computers
5 and walk back and forth and may or may not be listening.

6 We went ahead and hang up.

7 Do we need Jared Babula for any reason Jeff
8 Ogata?

9 STAFF COUNSEL OGATA: I don't believe so.

10 HEARING OFFICER CELLI: Okay.

11 STAFF COUNSEL OGATA: I thought you expected
12 Jared. I think he's just listening.

13 HEARING OFFICER CELLI: I'm just unmuting Jared.
14 Jared, I'm sure you heard that we're going to have you
15 hang up and call back.

16 STAFF COUNSEL BABULA: Yeah, that's fine.

17 HEARING OFFICER CELLI: Thank.

18 STAFF COUNSEL BABULA: Okay, bye.

19 HEARING OFFICER CELLI: Bye bye. Okay Mavis
20 Scanlon is listening on the computer. I don't think she
21 can speak. When you're listening in on -- is this Mavis
22 Scanlon?

23 MS. SCANLON: Yes. Can you hear me?

24 HEARING OFFICER CELLI: Oh, yes I can. Hello.

25 MS. SCANLON: Oh, good. It's working.

1 HEARING OFFICER CELLI: So did you hear that we
2 need to go silent for an in camera hearing, and we need
3 the parties to hang up. So if there's a telephone number
4 you'd like us to call back at, please give us that number.

5 MS. SCANLON: Can I just sign back in on the
6 computer?

7 HEARING OFFICER CELLI: Yes you can, but
8 you -- you probably want to give us your phone number so
9 we can call you to alert you that the confidential portion
10 is over.

11 MS. SCANLON: That's great. It's 510.

12 HEARING OFFICER CELLI: 510.

13 MS. SCANLON: 846.

14 HEARING OFFICER CELLI: 846.

15 MS. SCANLON: 7544.

16 HEARING OFFICER CELLI: 7544.

17 Thank you very much and can you show go ahead and
18 hang up your computer at this time.

19 MS. SCANLON: Do you know about how long this
20 might -- the confidential portion might be?

21 HEARING OFFICER CELLI: I really don't. I'm
22 hoping we'll certainly get it done before noon time.

23 MS. SCANLON: Thank you.

24 HEARING OFFICER CELLI: Thank you. Okay podium
25 Robert Koppe I'm leaving on. Rosario Gonzalez I have to

1 unmute.

2 Hi, Rosario. Can you hear me?

3 MS. GONZALEZ: Yes, I can.

4 HEARING OFFICER CELLI: Have you been following
5 the long?

6 MS. GONZALEZ: Yes, I have.

7 HEARING OFFICER CELLI: Okay. So please give us
8 a number we can call you back at?

9 MS. GONZALEZ: It's 760-482-4794.

10 HEARING OFFICER CELLI: Thank you very much. We
11 got that. Go ahead and hang up and we will call you when
12 it's time to resume.

13 MS. GONZALEZ: Thank you very much.

14 HEARING OFFICER CELLI: Thank you.

15 So for the record, now, I have -- and I don't
16 know why this isn't showing up on our screen over there,
17 and I don't have an IT person today I'm afraid, but we
18 have the following people show up on our screen. I have a
19 recording PC, which means that there's a recording of this
20 being recorded at the IT offices here at the Energy
21 Commission. We have the podium, which is really the host,
22 which is that microphone is a telephone, so that's just
23 in-house. By have Robert Koppe on. I don't know why
24 Rosario Gonzalez is still showing. She hung up, but I
25 don't know why she just don't go away like everybody else.

1 MR. WILKINS: Commissioner Officer Celli, it may
2 that my two witnesses are planning on calling in sometime
3 between now and 11 o'clock. It is possible they've called
4 in in the interim.

5 HEARING OFFICER CELLI: You know what, do they
6 have your cell number?

7 MR. WILKINS: They do not but I can contact them
8 and let them know.

9 HEARING OFFICER CELLI: You probably should do
10 that, just because that possible scenario might play out.

11 So I think Rosario Gonzalez is -- okay. Now she
12 should go away. Okay so I have Rosario Gonzalez here, can
13 you hear me?

14 I think she's not there, because I don't have
15 telephone icon. So I think we're down to just the podium,
16 the recording and Robert Koppe.

17 MR. ELLISON: Mr. Celli, if I could ask a quick
18 question. If you're intention is to leave Mr. Koppe on
19 the phone to hear the testimony, we would request that our
20 witness, Mr. Campbell be afforded the same opportunity and
21 we could have him call back in.

22 HEARING OFFICER CELLI: Okay. Why don't you go
23 ahead and give him a call and tell him to call right in
24 right now while I'm doing this. You know you want the
25 mess things up get technology involved.

1 Who's here in the audience now? I need to know
2 are these members of the public, people that are
3 authorized to be here? Let's find out.

4 MS. POTTENGER: With us is Karen Mitchell from
5 our office.

6 HEARING OFFICER CELLI: Is this Karen Mitchell
7 here?

8 Okay. So you're with Ellison, et al.

9 And then who's sitting behind you?

10 (Thereupon members of the audience identify
11 themselves.)

12 HEARING OFFICER CELLI: Okay. You're a witness?
13 Ormat witnesses.

14 I've got Geoff Lesh from staff and Joseph Hughes
15 from staff.

16 Okay. Any objection to any of these people
17 staying in the room from Ormat respondent?

18 MS. POTTENGER: No objection.

19 HEARING OFFICER CELLI: Okay.

20 PUBLIC ADVISER JENNINGS: And Hearing Officer
21 Celli, we're checking to see if there's an internal feed
22 separate from WebEx. So Mr. Worl is checking on that now.

23 HEARING OFFICER CELLI: An internal feed?

24 PUBLIC ADVISER JENNINGS: There use to be an
25 internal feed.

1 STAFF COUNSEL OGATA: In years past, you could
2 tie into Hearing Room A and you could hear what was going
3 on in here, so we're just checking to see if that still
4 exists or not. I don't know since I've been back.

5 HEARING OFFICER CELLI: So Bob went off to --

6 PUBLIC ADVISER JENNINGS: Check.

7 HEARING OFFICER CELLI: Am I still on the record?

8 So Robert Worl just went off to IT to check on
9 that. I hope he's going to bring somebody back, because
10 we probably want this back up on the screen again to tell
11 who's on the phone. I was going the write a note. I have
12 a sticky pad Ms. Jennings, so we can put something on the
13 door that says, you know, do not enter.

14 PUBLIC ADVISER JENNINGS: That's fine. And if
15 you can also note on the WebEx page that they should call
16 our office for information about the hearing, so that if
17 someone is trying the call in later, they would know to
18 call our office for information. So it's 654 --

19 HEARING OFFICER CELLI: Wait, wait, wait. Let me
20 do that. Let me open the document. It says the hearing
21 is closed during in camera proceedings, call it's
22 916 -- what's the rest?

23 PUBLIC ADVISER JENNINGS: 654-4489.

24 HEARING OFFICER CELLI: 4498 for further -- and I
25 guess you're going to have to explain this to your people,

1 so they understand what we're doing.

2 PUBLIC ADVISER JENNINGS: Right. Right.

3 HEARING OFFICER CELLI: -- further information.

4 Now I need to bring that document into the WebEx.
5 I need to save the document. Then I need to remember to
6 undo that red writing when it's time. Oh, good. We have
7 an IT person here.

8 (Whereupon an IT technician enters to assist
9 with technical matters.)

10 HEARING OFFICER CELLI: Thank you very much.

11 All right, but if I right click on her, all I can
12 do is change her role, allow to annotate, assign
13 privileges, mute, unmute, or check. I can't hang around.

14 I like that ability. I'm also told that people
15 can unmute themselves these days, which is not an
16 improvement on the system, in my opinion.

17 See everybody else hung up, but she hung up and
18 yet she persists in that little ball comes. I guess
19 that's for anybody.

20 IT TECH BRUCE: Well, what it is because she's
21 hung up, she wants hearing but she can see any
22 presentations.

23 HEARING OFFICER CELLI: But why don't I get an
24 icon to that effect?

25 Oh well.

1 IT TECH BRUCE: It's just her name is there.
2 That lets you know that she's still in the conference.
3 She just can't hear.

4 HEARING OFFICER CELLI: Okay. I want to share a
5 file.

6 (Thereupon a discussion occurred off the record.)

7 HEARING OFFICER CELLI: Also, everything shut off
8 up there.

9 IT TECH BRUCE: I'm guessing maybe the
10 screensaver activated. If you need that --

11 HEARING OFFICER CELLI: Yeah can we un -- can we
12 make it so it doesn't reactivate?

13 Yeah, and also there's this question of an inn
14 term feed. There used to be an audio feed that came out
15 of Hearing Room A that went to all offices in those little
16 intercom box things. And I want to know that that's
17 disabled, that that's not working now I hope that.

18 IT TECH BRUCE: Let me check on that.

19 HEARING OFFICER CELLI: Okay.

20 Mr. Jennings, so you know, it now says -- it's
21 the old sheet that showed that what the hearing was and
22 then it says this hearing is closed during in camera
23 proceedings. Call 916-654-4489 for further information.
24 And that's on the Internet right now, even though it's not
25 necessarily in our page.

1 IT TECH BRUCE: The broadcast is turned off. So
2 no one can see it or hear it

3 HEARING OFFICER CELLI: Well that's a problem
4 because I'm having witnesses testify, so that's why I had
5 everybody hang up.

6 PUBLIC ADVISER JENNINGS: He's referring to the
7 internal broadcast.

8 HEARING OFFICER CELLI: Oh, internal. I gotcha.
9 Thanks. So the WebEx is still working. And I still have
10 people on line. Okay. Can you hear me Robert Koppe?

11 MR. KOPPE: Yes.

12 HEARING OFFICER CELLI: Good. Okay. Thank you
13 very much Bruce.

14 IT TECH BRUCE: You're welcome.

15 HEARING OFFICER CELLI: We've been on the record
16 this whole time, which is preferable I want the record to
17 show who's in the room.

18 At this time, I have the -- I have Mr. Wilkins.
19 I have Robert Worl and Jeff Ogata and Samantha Pottenger
20 and Chris Ellison, and Tanya Gulleserian, and Elizabeth
21 Klebaner, and our court reporter, Mr. Petty, and witness
22 David Marcus. And then we have -- I'm sorry. Please
23 state your name.

24 MS. MITCHELL: Karen Mitchell.

25 HEARING OFFICER CELLI: Karen Mitchell,

1 M-i-t-c-h-e-l-l.

2 MS. MITCHELL: Correct.

3 HEARING OFFICER CELLI: Who is with?

4 MS. MITCHELL: Ellison, Schneider & Harris.

5 HEARING OFFICER CELLI: With Ellison, Schneider &
6 Harris. And also if the witnesses please just come on up
7 and state your name and spell it for the record just so we
8 know who's here and it makes it's way into the court
9 reporter's recording and also if you have business cards
10 you should give him a business card too, go ahead.

11 MR. HUGHES: Joseph Hughes, Energy Commission
12 staff.

13 HEARING OFFICER CELLI: H-u-g-h-e-s?

14 MR. HUGHES: (Nods head.)

15 HEARING OFFICER CELLI: Thank you.

16 Mr. Lesh.

17 MR. LESH: Geoffrey Lesh, Energy Commission
18 staff. G-e-o-f-f-r-e-y, L-e-s-h.

19 HEARING OFFICER CELLI: Thank you. Mr. Campbell,
20 please.

21 MR. BUCHANAN: Tom Buchanan, B-u-c-h-a-n-a-n,
22 with Ormat.

23 HEARING OFFICER CELLI: Thank you, Mr. Buchanan.
24 Sorry.

25 Ms. Wardlow.

1 MS. WARDLOW: Charlene Wardlow, C-h-a-r-l-e-n-e,
2 W-a-r-d-l-o-w with Ormat.

3 HEARING OFFICER CELLI: Thank you. Finally.

4 MR. SULLIVAN: Bob Sullivan with Ormat,
5 S-u-l-l-i-v-a-n.

6 HEARING OFFICER CELLI: Thank you, Mr. Sullivan.

7 Isn't it interesting that it's not on mine and
8 I'm supposed to be the host. How did that happen?

9 Oh, because I thought I made that -- oh, I made
10 that only on mine. Okay. What I need to do -- I am the
11 host, though. Interesting. Interesting issue. I don't
12 know if Bruce is still out there. Bruce from IT, any old
13 time you'd like to drop in, we'd love to see you.

14 (Laughter.)

15 HEARING OFFICER CELLI: Yes. I don't think that
16 that's big a deal.

17 Just for the record, as you look on the wall, it
18 says -- you know, on the projectors it says call in user
19 1. On my screen it shows Robert Koppe, because I made
20 that change, but apparently it didn't take on the other
21 screens.

22 (Thereupon the Ormat Nevada, Inc. hearing
23 moved into an in camera hearing.)

24 HEARING OFFICER CELLI: Okay. We're now having
25 an in-camera proceeding for the reason that -- oh, one

1 last thing. Ms. Jennings is probably up talking to her
2 people. I want to just put something on the door that
3 says in camera.

4 So the record should reflect I wrote on a yellow
5 sticky, in-camera proceedings pending. Do not enter.

6 Thank you, Mr. Ogata. If can you just stick that
7 to the door at eye level at about 5'5" I think is the
8 average, so we'll get everybody, get the tall and the
9 short people.

10 Okay, with that now you have Robert Koppe on the
11 air. You're calling Mr. Marcus first. As soon as Mr.
12 Ogata gets back, we'll resume.

13 So just for the record, as long as we're waiting
14 I'm just going to make a little list of things we need to
15 reopen WebEx, which means to call the participants. We
16 need to remove note on door. And is there anything else
17 we have to do when we conclude the confidential portions?

18 These are my little to-dos in case it starts
19 getting complicated out there.

20 I wonder if I could send one of the advisors out
21 to just -- would you mind. I'm having advisor Galen Lemei
22 go out and tell the security people -- their office is on
23 the inside of the door just to tell them to wait till the
24 in-camera hearing is over before they come back in. And
25 so we'll resume when Mr. Lemei returns.

1 Okay. I've got Laura Murphy on the line now, but
2 she's not -- so apparently Don Campbell is back. Laura
3 Murphy is back, but it appears that they're back only on
4 their computer without sound on. Let me unmute it all.

5 Okay. Now Don Campbell, can you hear me?

6 MR. CAMPBELL: Yes, I can.

7 HEARING OFFICER CELLI: Okay thank you.

8 And Laura Murphy, can you hear me?

9 Okay, Laura, if you're not -- don't worry about
10 it. I think you're on your computer only. Laura Murphy
11 works for the Public Adviser's office. And so she's
12 probably listening in to find out when the in-camera
13 portion is over. Robert Koppe you're still on the line?

14 MR. KOPPE: Yes.

15 HEARING OFFICER CELLI: Okay. And I have Rosario
16 Gonzalez still -- oh, I see what's happening. Both Laura
17 Murphy and Rosario Gonzalez are visual only not audio.
18 Meaning that on their computer they'll be able to see when
19 we take down the thing that says -- oh, those interesting.

20 One moment.

21 So I just had to drag that down a little bit, so
22 can you all see that it says the hearing is closed during
23 an in-camera proceedings and it gives the Public Adviser's
24 telephone number to call for further information. And I
25 would have to change that as well. And so that's what

1 Rosario Gonzalez and Laura Murphy are looking at, but
2 they're not getting any audio. So let me make a note to
3 look change WebEx word document.

4 Okay. I think those are all the things I need to
5 do when we resume.

6 Boy, it's a big deal not to get the security
7 people not to come in. I think at this moment we can go
8 off the record.

9 (Thereupon a discussion occurred off the record.)

10 HEARING OFFICER CELLI: Back on the record.

11 Galen Lemei is back. Direct examination is with
12 CURE. So please proceed.

13 MS. KLEBANER: Thank you, Officer Celli. CURE
14 would like to call Dave Marcus as its first witness.

15 Thank you.

16 Mr. Petty, would you please swear in Mr. Marcus.

17 Whereupon,

18 DAVE MARCUS

19 was called as witness herein, and after first
20 having been duly sworn, was examined and
21 testified as follows:

22 THE COURT REPORTER: Please state and spell your
23 name for the record.

24 MR. MARCUS: David Marcus, M-a-r-c-u-s.

25 THE COURT REPORTER: Thank you.

1 HEARING OFFICER CELLI: Please proceed.

2 DIRECT EXAMINATION

3 BY MS. KLEBANER:

4 Mr. Marcus, are the conclusions that you provide
5 today your own?

6 MR. MARCUS: Yes, they are.

7 MS. KLEBANER: Could you please summarize your
8 qualifications, education and professional experience.

9 MR. MARCUS: I have a Master's Degree in energy
10 and resources from UC Berkeley - actually, a student with
11 Commissioner Weisenmiller - which involved course work and
12 engineering and economics as well as other fields. I
13 worked as a planning engineer for the Bechtel Power
14 Corporation on the Vogtle nuclear plant in Georgia. I
15 worked at this Commission as both a staff member and then
16 as an advisor to the Commissioner.

17 And subsequently --

18 HEARING OFFICER CELLI: Just for the record,
19 anybody who's on the phone, which would be -- okay, one
20 mine. I've got Don Campbell, Robert Koppe, if you have
21 paper or anything near your phone, please don't shuffle it
22 around.

23 I have someone who just called in as call-in user
24 number 4. Did anyone just call in? Please state your
25 name on the telephone?

1 Did I -- okay, let me -- this says mute. So he's
2 obviously unmuted. Call in user number 4, the person who
3 just called in on the phone, could you please identify
4 yourself?

5 This means you. Please state your name.

6 This is going to thwart the whole thing.

7 Now I have Don Campbell on the phone. I have
8 Robert Koppe. And then I've got someone who just called
9 in, and I need that person who just called in to
10 please -- let me make sure. Participant unmute -- no, I
11 can't unmute all. So everybody is unmuted.

12 So I need the person who's -- for me to mute him
13 doesn't -- defeats the purpose. I need to have him hang
14 up or her. I have a call in user -- please state your
15 name if you're on the telephone.

16 This is -- I can't hang up. I don't have that
17 capability.

18 MS. KLEBANER: Officer Celli, we can proceed up
19 to a certain point, and then pause and wait to see whether
20 the user is still on the line.

21 HEARING OFFICER CELLI: Yeah. This -- but you
22 know what the problem is, is that people can be calling in
23 ongoingly and I don't have the capability from up here
24 from -- to hang up on them or to exclude them. The only
25 thing to do is mute them, but the audio is still going to

1 go out.

2 I can only mute is the only power we have. See
3 that. I've got total power and no authority.

4 So --

5 MR. ELLISON: Officer Celli, can I suggest, I
6 think we've been keeping this lineup for the purpose of
7 Mr. Koppe and Mr. Campbell being able to hear. One option
8 would be if CURE is willing to forgo Mr. Koppe hearing the
9 testimony, we could forgo Mr. Campbell hearing it and we
10 could just proceed by hanging up the phone.

11 HEARING OFFICER CELLI: That's right. I could do
12 that. But the problem is that presents -- oh, you know, I
13 think that's I'm going to have to do. I'm going to have
14 to mute all, which would include the podium, so there
15 would be no sound out. But then Mr. Campbell and Mr.
16 Koppe would not be getting the benefit until I turn
17 that -- until I unmute the podium. Is that acceptable
18 CURE? We need to seal the proceedings.

19 MS. KLEBANER: Sorry to interrupt.
20 That's -- CURE was would agree to that, but we would ask
21 for a stipulation that any cross-examination of Robert
22 Koppe be limited to his direct testimony.

23 HEARING OFFICER CELLI: Right. And since there's
24 two of you, I would just say you might want to take
25 advantage of the fact that if you have your cell phone you

1 might want to give them a call, and explain to them what's
2 going on, and why I'm going to be muting the parties. The
3 same is true with Mr. Campbell. Give him a call, tell him
4 we have people calling in. We can't control it. The only
5 way I can do it is mute the whole proceeding which is what
6 I'm about to do. And prevent any sound from being
7 broadcast. And then this way at least someone in your
8 entourage can inform your witness about what's going on,
9 what the testimony is. Perhaps they can even pickup the
10 audio from overhead.

11 MR. KOPPE: Maybe there's something I'm
12 missing -- this is Robert Koppe. What I'm testifying,
13 I'll have to be able to hear because I'll have to be able
14 to hear the questions.

15 HEARING OFFICER CELLI: That's correct. And when
16 it's time for you to testify, we may just take your
17 testimony over somebody's cell phone.

18 Hang on a minute.

19 Okay. With that then, I'm going to instruct the
20 parties to call their witnesses, Mr. Campbell and Mr.
21 Koppe, and let them know that -- I have computer audio
22 network AMX. I'm going to ask that we -- you know, it's
23 killing me that we're eating up the clock with this thing.
24 And so right now what I'm going to do is go ahead and hang
25 up or that is mute all.

1 MR. CAMPBELL: Just so that you know where I am,
2 I have one land line. No Internet connection and no cell
3 phone.

4 HEARING OFFICER CELLI: Okay you know --

5 MR. CAMPBELL: So if I stay on this land line, I
6 won't know.

7 HEARING OFFICER CELLI: Mr. Koppe, does Tanya or
8 Elizabeth know your phone number where you're at?

9 MR. KOPPE: Yes.

10 HEARING OFFICER CELLI: So what I'm going to
11 instruct you to do is go ahead and hang up and they're
12 going to call you on a cell phone right now.

13 MR. KOPPE: Okay.

14 HEARING OFFICER CELLI: Okay, great.

15 Now everybody is muted, included us, the room.
16 We can't -- we're not going out on WebEx. I'm going to
17 leave WebEx up, because I want people who come in, other
18 callers, to see that we're having an in-camera proceeding.
19 I want them to see that much.

20 So that I would preserve.

21 MS. POTTENGER: Hearing Officer Celli, I have a
22 quick point of order. What are we going to do once Mr.
23 Koppe and Mr. Campbell have to testify, since they do have
24 to testify by telephone? I think we'll be facing this
25 issue then.

1 HEARING OFFICER CELLI: Right now, we're looking
2 into -- we have conference call capability in the room so
3 someone could actually just call in on a conference call.
4 And if we only let those people call in the conference
5 call number, and I think we're finding out how to do that.

6 MS. POTTENGER: Okay. Great. So the two
7 witnesses can call in separately in the conference and
8 then they'll be able to stay muted.

9 HEARING OFFICER CELLI: Right. And they could
10 come out -- and they'll be on the microphone, so that the
11 court reporter would get it.

12 MS. POTTENGER: Perfect. Thank you very much.

13 HEARING OFFICER CELLI: So we're going to have
14 to -- that's why we need to keep them on the line so that
15 we can tell them okay you need the number and here's the
16 pat word sort of thing.

17 (Thereupon a discussion occurred off the record.)

18 HEARING OFFICER CELLI: Okay. We're on the
19 record. We've been on the record this whole time, I'm
20 assuming. And the people who are in the room now are all
21 of the people approved, they're signatories to the
22 non-disclosure agreement, including Public Adviser.

23 PUBLIC ADVISER JENNINGS: Mr. Wheatland suggested
24 last week that I was bound by it without having signed it
25 but I'm happy to sign it.

1 HEARING OFFICER CELLI: Okay. Well, why don't
2 you just stipulate that --

3 PUBLIC ADVISER JENNINGS: Yeah, that's fine.

4 HEARING OFFICER CELLI: -- to be bound by it.
5 Thank you. As does everyone else in the room here.

6 Okay. So let's proceed then with the testimony
7 of Mr. Marcus he was talking about his qualifications.
8 Sorry for all of the -- wait. We cannot proceed because
9 staff left the room. So we're going to go off the record
10 for a moment.

11 (Thereupon a recess was taken.)

12 HEARING OFFICER CELLI: Back on the record.

13 We're with complainant CURE and we're taking the
14 testimony of David Marcus, so let's resume.

15 MS. KLEBANER: I will repeat the question that
16 was asked before we went off the record.

17 Mr. Marcus, please summarize your qualifications,
18 education, and professional experience and to the degree
19 that you can continue from where you left off, please.

20 MR. MARCUS: Yes as I indicated, I worked as
21 planning engineer for Bechtel. I worked as a staff member
22 and then subsequently as an advisor to a Commissioner here
23 at the Energy Commission and I worked as a staff economist
24 for the Environmental Defense Fund.

25 And since 1985, I've been an independent energy

1 consultant for a variety of clients in over 100 separate
2 proceedings. As a consultant, I've testified as an expert
3 before Congress, before FERC, before this Commission, and
4 before the State utility regulatory commission's of
5 California, New Mexico, and Colorado.

6 MS. KLEBANER: Thank you. Please describe for us
7 what California Unions for Reliable Energy asked you to
8 do?

9 MR. MARCUS: CURE asked me to evaluate the
10 individual generating capacities of the North Brawley and
11 East Brawley plants.

12 HEARING OFFICER CELLI: So before you go on, let
13 me ask respondent Ormat -- or before -- actually,
14 complainant, what is Mr. Marcus an expert in, so that we
15 can use that as a standard? As it relates to these
16 proceedings, what will Mr. Marcus testify and what is his
17 expertise?

18 MS. KLEBANER: Mr. Marcus is an expert to the
19 issue that he will be testifying to in this proceeding as
20 described in the prehearing conference statement.

21 HEARING OFFICER CELLI: I wonder if you could be
22 a little more -- since I -- it's hard for me to flip
23 through a lot of pages up here.

24 MS. KLEBANER: Sure. The topics of generation
25 capacity, plant loads, transmission interconnection.

1 HEARING OFFICER CELLI: Okay. Generation
2 capacity, plant load, and you said transmission -- I
3 didn't get the last one, Ms. Klebaner.

4 MS. KLEBANER: Transmission interconnection.

5 HEARING OFFICER CELLI: Interconnection. Now,
6 let me just to speed things up, hopefully, Ms. Ellison,
7 you had -- do you have an objection to Mr. Marcus
8 testifying as an expert on generation capacity or plant
9 load or transmission interconnection, which, if any of
10 those, do you object to?

11 MR. ELLISON: What I would suggest is this, Mr.
12 Celli, let me ask just a couple of voir dire type
13 questions of Mr. Marcus and then we can proceed.

14 HEARING OFFICER CELLI: Okay. Why don't you just
15 do that. Let's just limit it to his qualifications as an
16 expert on generation capacity, plant load and transmission
17 interconnection

18 MR. ELLISON: Okay.

19 VOIR DIRE EXAMINATION

20 BY MR. ELLISON:

21 Mr. Marcus, good morning.

22 MR. MARCUS: Good morning, Mr. Ellison.

23 MR. ELLISON: A couple of questions. One are you
24 a registered engineer?

25 MR. MARCUS: No, I am not.

1 MR. ELLISON: Two, are you an expert in the
2 assessment of geothermal resources in either their supply
3 or quality?

4 MR. MARCUS: No, I am not.

5 MR. ELLISON: Have you ever been responsible for
6 the operation of a geothermal power plant?

7 MR. MARCUS: No, I have not.

8 MR. ELLISON: Okay. With those questions in the
9 record, we can proceed.

10 HEARING OFFICER CELLI: Thank you. So
11 essentially then if you've established that he's not an
12 expert in geothermal resources I guess was the way you
13 couched it, is not a registered engineer - although that
14 isn't necessarily a pre-requisite to testifying as an
15 expert - or responsible for the operations of a geothermal
16 plant, do you have any objection to his testifying
17 regarding generation capacity, plant load, or transmission
18 interconnection?

19 MR. ELLISON: Not at this time. I would reserve
20 the right to object depending upon what he chooses to say
21 about those topics.

22 HEARING OFFICER CELLI: Understood.

23 MR. ELLISON: For example, if he gets into
24 detailed engineering, the fact that he's not an engineer,
25 I might object. But generally speaking, no we can

1 proceed.

2 HEARING OFFICER CELLI: Thank you. And staff,
3 any objection to -- so really what I'm asking is any
4 objection to finding that this expert Mr. Marcus is an
5 expert in generation capacity, plant load or transmission
6 interconnection, Mr. Ogata?

7 STAFF COUNSEL OGATA: No. No objections to that.

8 HEARING OFFICER CELLI: And Mr. Wilkins.

9 MR. WILKINS: No objections at this time.

10 HEARING OFFICER CELLI: Okay. Then for purposes
11 of this hearing, we're going to find that Mr. Marcus is
12 qualified as an expert in generation capacity, plant load,
13 and transmission interconnection. And with that then, you
14 can just proceed into your direct without having to get
15 into his qualifications anymore.

16 MS. KLEBANER: Thank you.

17 HEARING OFFICER CELLI: Thank you.

18 CONTINUED DIRECT EXAMINATION

19 BY MS. KLEBANER:

20 Mr. Marcus, what was your initial step in making
21 your evaluations?

22 MR. MARCUS: I first looked at the regulations
23 that say how gross generating capacity is measured, in
24 particular that if there's more than one turbine
25 generator, the maximum gross rating of all turbine

1 generators shall be added together to determine the total
2 maximum gross rating of the plant's turbine generators.
3 And that the maximum gross rating of a turbine generator,
4 shall be the outputted megawatts at the conditions, which
5 yield the highest generating capacity on a continuous
6 basis. And that the maximum gross ratings in the plant
7 overall heat -- sorry, overall plant heat and mass balance
8 calculations are subject to verification of the turbine
9 generator manufacturer's performance guarantee,
10 specifications and procurement contract, if available.

11 I next looked at the regulations for how a
12 parasitic load is measured. That's the auxiliary load
13 that's used to make things work. And that's defined in
14 the regulations as the -- in part, as the electrical
15 rating of the sum of the minimum continuous and the
16 average intermittent on-site electrical power
17 requirements, necessary to support the maximum gross
18 rating. And then there's a specific edition for
19 geothermal projects that the minimum auxiliary load also
20 includes the minimum electric operating requirements for
21 the associated geothermal field, which are necessary for
22 and supplied directly by the power plant.

23 MS. KLEBANER: Thank you, Mr. Marcus. Did you
24 also review the document titled California Energy
25 Commission Staff General Method for Determining Thermal

1 Power Plant Generating Capacity?

2 MR. MARCUS: Yes, I did.

3 MS. KLEBANER: Can you please tell me whether
4 northern have North Brawley -- the project North Brawley
5 is a rankine cycle project?

6 MR. MARCUS: Yes, it is.

7 MS. KLEBANER: And can you also tell me whether
8 the East Brawley project is a rankine cycle project?

9 MR. MARCUS: Yes, it is too.

10 MS. KLEBANER: According to the Commission staff,
11 general method for determining thermal power plant
12 generated capacity, what method is used to make the gross
13 rating determination for North Brawley and East Brawley
14 projects?

15 MR. MARCUS: The staff's method, in general,
16 analyzes gross plant output, assuming quote new and clean
17 conditions for the project's equipment, quote maximum
18 steam flow conditions under site specific ambient and
19 operating conditions, unquote, and quote maximum few input
20 conditions unquote.

21 Now North and East Brawley don't use steam as a
22 substance or don't use water as a substance that is first
23 vaporized and then flowed through the turbine to generate
24 power. They use isopentane. So I took maximum steam flow
25 in the staff's methodology to mean maximum isopentane

1 flow.

2 Similarly, since the heat source that's used to
3 vaporize the isopentane is geothermal brine, and not
4 combustion heat from a fossil fuel, I took quote maximum
5 fuel input condition -- maximum fuel input conditions to
6 mean maximum geothermal brine flow conditions, because
7 that is the fuel.

8 And assuming maximum geothermal brine flow
9 conditions make sense, because if you impose a fuel
10 constraint, then the notion of a maximum would be
11 completely artificial, you've could have a power plant
12 designed to produce 90 megawatts, but if you only gave it
13 half the brine it was capable of handling, it would only
14 produce 45 megawatts. And under the staff's general
15 method, it would still be a 90 megawatt power plant, even
16 though it was only producing 45 megawatts in that
17 particular moment.

18 MS. KLEBANER: Mr. Marcus, what is staff's
19 general method for making an auxiliary load determination
20 for the North Brawley and East Brawley projects?

21 MR. MARCUS: Once staff has determined a maximum
22 generation, then they look at the auxiliary load that
23 quote, corresponds to the gross rating conditions unquote.
24 And the staff approach makes clear they don't simply
25 accept the developer's values.

1 HEARING OFFICER CELLI: Let's briefly break for a
2 minute. I just want to check in to see if we
3 have -- sounds like we -- Jerome, do we have a phone
4 connection? It's coming in over to speakers.

5 Are we on conference call now?

6 That's a yes.

7 Okay. Then can we instruct the two witnesses to
8 call into this conference line, at this time. I'm sorry
9 for the interruption, but I just want to get these other
10 people in.

11 And is Mr. Campbell informed to call in?

12 Good.

13 Okay. So do we -- will we get some sort of audio
14 signal that says that we just received somebody in the
15 conference?

16 Okay. All right. So I think we'll just proceed
17 and be aware that the record will show that the conference
18 call may beep and state a name of the incoming caller.

19 So let's continue on, Ms. Klebaner. Sorry.

20 MS. KLEBANER: Thank you. Mr. Marcus, what
21 materials did you review in preparation for your testimony
22 today?

23 MR. MARCUS: Before that can I finish answering
24 the previous question?

25 MS. KLEBANER: Oh, I apologize. Yes, please.

1 Let me restate the question. According to the Commission
2 staff's general method for determining thermal power plant
3 generating capacity, what method was used to make the
4 gross rating determination for North Brawley and the East
5 Brawley projects?

6 MR. MARCUS: Well, I described the gross rating
7 and then I was in the middle of describing the auxiliary
8 load that subtracted from that gross rating. And I was
9 saying that the staff methodology states that quote, any
10 individual loads appear unreasonable are reviewed in more
11 detail and compared to reasonable industrial norms for
12 projects of similar size and type, unquote.

13 HEARING OFFICER CELLI: And you're reading for
14 the record -- what are you reading from, Mr. Marcus?

15 MR. MARCUS: That's a quote from the --

16 MS. KLEBANER: Hearing Officer Celli, this
17 information is provided in Exhibits 50 and 51.

18 HEARING OFFICER CELLI: So he's reading from
19 exhibit -- which one?

20 MS. KLEBANER: He's quoting from -- well, the
21 same information is provided in both exhibits. Mr. Marcus
22 is quoting the information provided in those documents.

23 HEARING OFFICER CELLI: So you were saying
24 there's a -- were you quoting that language unreasonable
25 load?

1 MR. MARCUS: Yes, where I said quote and then
2 unquote that was a quote from the Energy Commission's
3 staff's August 9th, 2011 general method for determining
4 thermal power plant generating capacity page.

5 MS. KLEBANER: And this method is in Exhibit 50.

6 HEARING OFFICER CELLI: Exhibit 50, page?

7 MS. KLEBANER: Page --

8 MR. MARCUS: The auxiliary load is on page three
9 and --

10 MS. KLEBANER: Actually, it's page -- starting
11 from the first page of the document, it is page three.
12 This is the methodology that was attached to staff's
13 letter to the applicant dated August 15th, 2011.

14 And the auxiliary load determination, which Mr.
15 Marcus is quoting is -- that information is on page three
16 and four as numbered in that document.

17 HEARING OFFICER CELLI: Of Exhibit 50?

18 MS. KLEBANER: Exhibit 51 starting on the
19 second -- the third page in. And then from then on the
20 document is numbered. And the information is on numbered
21 page three and four.

22 HEARING OFFICER CELLI: Thank you. In the
23 future, as you read things, Mr. Marcus, if can you tell us
24 what you're reading from.

25 Before you resume, Mr. Campbell, are you on the

1 phone? Can you hear me?

2 MR. CAMPBELL: Yes, I can.

3 HEARING OFFICER CELLI: Thank you very much. And
4 Mr. Koppe are on you the phone can you hear me?

5 MR. KOPPE: Yes.

6 HEARING OFFICER CELLI: Oh excellent. And you're
7 the only two people on the phone, I hope.

8 I'm going to ask you to mute your phones until
9 it's time to talk, because we can hear your TVs going in
10 the background or whatever else you might have radio,
11 pets, children, traffic noise. So with that, Ms.
12 Klebaner, continue direct.

13 MS. KLEBANER: Thank you. Mr. Marcus, would you
14 like to continue answering the question?

15 MR. MARCUS: Yes. I was about to say that the
16 staff's methodology for auxiliary load determination also
17 includes language analogous to the regulations that quote
18 now I'm again quoting from Exhibit 51.

19 The minimum electrical operating requirements for
20 the associated geothermal field, which are necessary for
21 and supplied directly by the power plant, unquote.

22 MS. KLEBANER: Mr. Marcus, can you please tell us
23 what materials you reviewed in preparation for your
24 testimony today?

25 MR. MARCUS: Yes. I reviewed the regulations and

1 the staff methodology that I've just discussed. I
2 reviewed Exhibits 1 and 2 which are the CURE complaint and
3 Ormat's response to that complaint. And then I reviewed
4 exhibits 1 through 47, which are the bulk of the CURE
5 exhibits identified today.

6 I then reviewed a series of Ormat confidential
7 documents that were supplied in response to a data
8 request. Each of those documents the file had a name and
9 then a unique identifying number. And I've used those
10 numbers to identify them. And I reviewed documents 21809
11 through 21840. And then I also reviewed the staff initial
12 assessment done for today's hearing.

13 MS. KLEBANER: Mr. Marcus, after reviewing
14 available materials, what did you do next?

15 MR. MARCUS: The next thing I did, and this was
16 after reviewing the confidential Ormat documents, was to
17 prepare a series of questions about the details of the
18 unit's design and operation, based on those confidential
19 documents. And then I asked many, in fact, most of those
20 questions to Ormat as well as follow-up questions based on
21 Ormat's answers, during the technical conference held on
22 September 22nd of 2011. And then based on the documents
23 that I've previously identified and based on Ormat's
24 answers during the technical conference, I made a series
25 of calculations to quantify my opinions on various issues

1 regarding the appropriate capacity ratings, and wrote up
2 testimony reflecting those calculations.

3 MS. KLEBANER: Thank you. Did you independently
4 review all the information and documents in preparing your
5 testimony?

6 MR. MARCUS: Yes, I did.

7 MS. KLEBANER: How did you measure the net and
8 maximum gross rating for the North Brawley project and the
9 East Brawley project?

10 MR. ELLISON: Actually, Mr. Celli, I believe I
11 just heard a reference to calculations made subsequent to
12 the technical conference. We have not been provided with
13 any such calculations. We have not seen any testimony of
14 that nature and it's not in the complaint.

15 HEARING OFFICER CELLI: Okay. So I thought that
16 the question went to what methodology did Mr. Marcus use
17 to generate these calculations? They may be in his head.
18 I don't know. But I thought the question went to the
19 method.

20 MS. KLEBANER: That's correct.

21 HEARING OFFICER CELLI: We're going to hear
22 whether -- what the method is, and then maybe on cross you
23 can get into when this method was utilized.

24 MR. ELLISON: Well, I'm going to object to
25 testimony based upon calculations that have not been

1 provided to us in advance, so that we can prepare
2 cross-examination in an orderly way or know what the case
3 is against Ormat. And I think what we're about to hear
4 are engineering calculations, based upon -- or the results
5 of engineering calculations that we haven't seen.

6 HEARING OFFICER CELLI: CURE, any response?

7 MS. KLEBANER: The -- may I ask a question of Mr.
8 Marcus, first?

9 HEARING OFFICER CELLI: Well, actually there's an
10 objection pending, so before he answers I think we better
11 resolve it.

12 MS. KLEBANER: The response is, the complaint
13 alleges that each plant is over 50 megawatts, and our
14 witness is testifying to support that conclusion. The
15 information that Mr. Marcus is relying on is information
16 that was submitted and prepared by respondent. We are
17 relying on the respondent's numbers regarding their
18 proposed and existing power plant.

19 HEARING OFFICER CELLI: So the objection is that
20 is complainant and party with the burden of proof, that
21 that is something that should have been submitted.

22 MR. ELLISON: And Mr. Chair --

23 HEARING OFFICER CELLI: Go ahead.

24 MR. ELLISON: Mr. Celli, let me also add in
25 anticipating exactly this problem, I raised it at the

1 prehearing conference and this week --

2 MS. KLEBANER: Officer Celli, it has already been
3 alleged that each power plant is --

4 HEARING OFFICER CELLI: Wait a minute. Let me
5 hear what the point is and then we'll give CURE a chance
6 to speak.

7 MR. ELLISON: Of course we're aware that it has
8 been alleged that these power plants are over 50
9 megawatts. The issue is how do they get there? And we
10 not only raised this concern at the prehearing conference.
11 We submitted a data request specific to Mr. Marcus's
12 testimony saying is he going to testify using section 2003
13 and the Commission's method. They answered yes. We then
14 asked what will be the basis for that testimony? We
15 didn't get any calculations of the nature that I believe
16 we're about to hear about.

17 Mr. Marcus has testified, a moment ago, that he
18 performed calculations exactly of the nature that we asked
19 to see in advance and I'm objecting strenuously to his
20 testifying based upon calculations that were not provided
21 to us in response to that data request.

22 HEARING OFFICER CELLI: Okay. You know what, I
23 think -- let me do this. I think for the time being I'm
24 going to overrule the objection. And the reason is that
25 we have parties here, staff, and members of the

1 respondent's group who are listening to this testimony,
2 who will be able to respond, because essentially it either
3 comports or doesn't comport with the regs with regard to
4 calculation. And he was just about to testify as to his
5 method.

6 MR. ELLISON: Mr. Celli, I understand that you're
7 overruling my objection. I want to make clear that had
8 that information been provided to us in advance, we would
9 have had a chance to sit down with our engineers and go
10 through it. In real time, we don't have that chance.
11 That's a denial of due process.

12 MS. KLEBANER: The information was discussed at
13 the September 22nd workshop, which was held on Thursday.
14 One business day before this hearing.

15 HEARING OFFICER CELLI: But --

16 MR. ELLISON: Mr. Marcus just testified, and I
17 will be happy to have the record read that subsequent to
18 the technical conference he performed calculation and that
19 he is --

20 HEARING OFFICER CELLI: So that's the basis of
21 the objection. I understand that. So the objection is
22 that while it may have been discussed at the workshop, the
23 conclusions have not been made available to the
24 respondent, and so they're at a disadvantage.

25 MR. ELLISON: What was discussed at the workshop

1 were questions from Mr. Marcus to our engineers. We were
2 basically responding to his questions to help him prepare
3 his case. What was not discussed at the workshop was any
4 disclosure by CURE of what that case might be or his
5 calculations or his conclusions, so that we could prepare
6 our testimony. We were responding to questions from Mr.
7 Marcus, not the other way around.

8 MS. KLEBANER: May I respond?

9 HEARING OFFICER CELLI: Please.

10 MS. KLEBANER: The workshop was an open forum.
11 The questions could have been asked of our experts as
12 well. They weren't.

13 MR. ELLISON: They were asked in writing in a
14 data request.

15 MS. KLEBANER: Before the workshop.

16 MR. ELLISON: That's correct.

17 MS. KLEBANER: And they could have been repeated
18 at the workshop, but they weren't.

19 HEARING OFFICER CELLI: And where -- let me ask
20 this. Do you -- are those data requests part of your
21 record exhibits?

22 MR. ELLISON: Yes.

23 HEARING OFFICER CELLI: Which exhibit number are
24 we talking about?

25 MS. POTTENGER: Exhibit 20 -- oh, excuse me.

1 Exhibit 206 contains CURE's responses to Ormat's data
2 requests at 1 and 2 and those responses contained the data
3 requests that we issued to CURE.

4 HEARING OFFICER CELLI: What page?

5 MS. POTTENGER: I always have hard copies of
6 those exhibits if you would like a copy of them?

7 HEARING OFFICER CELLI: Please.

8 We're off the record for a moment.

9 (Thereupon a discussion occurred off the record.)

10 HEARING OFFICER CELLI: I'm holding Exhibit 206.
11 And the question I have is at what page -- can you direct
12 me to where the question was asked?

13 MS. POTTENGER: Directing you to page two in
14 response to request 1, and in -- excuse, me request 1C,
15 request a confirmation regarding whether David Marcus
16 would testify. Request 1D ask -- requesting confirmation
17 whether David Marcus would provide testimony that the net
18 generating capacity of East Brawley as calculated pursuant
19 to section 203 is 50 megawatts or above.

20 Request 1E requested explanation of the basis for
21 the testimony and all documentation materials and
22 resources relied upon -- relied upon to support the
23 testimony. And similar requests were made for North
24 Brawley.

25 MS. KLEBANER: Hearing Officer Celli, may I make

1 a comment?

2 HEARING OFFICER CELLI: Yes.

3 MS. KLEBANER: Then I would like an opportunity
4 for Ms. Gulesserian to add. Counsel for respondent just
5 said they helped us prepare the case during the workshop.
6 They had notice of the issues that we were going to
7 discuss, based on the discussions that we asked. They
8 could have asked the questions then.

9 There is no prejudice to respondent. No one
10 received pre-filed testimony -- no party received
11 pre-filed testimony in this proceeding. We are in exactly
12 the same shoes as the respondent and every other party in
13 this case.

14 HEARING OFFICER CELLI: Well all of --

15 MS. KLEBANER: We don't have the benefit of -- I
16 apologize for interrupting. We don't have the benefit of
17 respondent's analysis subsequent if questions that were
18 asked during the September 22nd workshop.

19 HEARING OFFICER CELLI: Understood. We're going
20 to go off --

21 MR. ELLISON: Can I point out two things?

22 HEARING OFFICER CELLI: Yes.

23 MR. ELLISON: One, we did ask at the workshop in
24 addition to the data requests specifically about these
25 calculations. And secondly, once again as I pointed out

1 in my opening statement, CURE has the burden of proof and
2 they have the burden of letting parties know what the
3 basis of their case is. They are essentially the
4 applicant here. We are not.

5 HEARING OFFICER CELLI: We're going to go off the
6 record for a moment.

7 (Thereupon a discussion occurred off the record.)

8 HEARING OFFICER CELLI: Okay. We're back on the
9 record. The Committee has conferred and essentially the
10 objection is preserved for the record. The Committee
11 isn't going to rule on it, per se, now. I think it's
12 going to be the subject probably in your briefing or
13 perhaps a subsequent hearing, if need be. We need that
14 information in order to proceed and so we're going to
15 allow the question and the answer.

16 MR. ELLISON: Officer Celli, I understand and
17 accept your ruling. But let me make a point, which I
18 think is going to come up again and again in this
19 proceeding. We are caught in a Hobson's Choice here
20 between on the one hand -- you have -- my client has been
21 brought before you, essentially against their will, to
22 answer a complaint.

23 We all know what the real motives are here, which
24 is why I mentioned it. We are caught between a Hobson's
25 Choice of on the one hand trying to get this case over

1 quickly. Justice delayed is justice denied, especially in
2 this context, given the motives of the complainant.

3 But secondly, we're caught in the situation of
4 having been unfairly surprised by the testimony that we're
5 seeing here, even though we raised this concern all along.
6 The idea of subsequent hearings, as you mentioned, or even
7 the kind of briefing that we're talking about, is also
8 objectionable to us. We want this case decide. We want
9 it decided based on what happens today.

10 HEARING OFFICER CELLI: Well, that may or may not
11 happen a determination today. We're going to have to see
12 what the evidence says. But the fact is the Committee
13 wants to know what the complainant's case is and why they
14 think there is jurisdiction here. And that's the bottom
15 line.

16 MR. ELLISON: At the end --

17 HEARING OFFICER CELLI: So they have an expert
18 who says this is how I've calculated. If the calculation
19 is wrong, if it's erroneous, if it doesn't comply with the
20 regulations or require calculation, then you'll be able to
21 prove that.

22 MR. ELLISON: By the end of the day, Mr. Celli,
23 I'm sure that we will be able to convince you that that's
24 not the case and that you can decide this case fairly,
25 notwithstanding this evidence.

1 But I do, for the record, preserve our objections
2 about the fairness of this proceeding.

3 HEARING OFFICER CELLI: Okay. The objection is
4 preserved. So Mr. Marcus you can answer the methodology
5 question.

6 MS. GULESSERIAN: I would like to preserve for
7 the record our comments on the objection. The complaint
8 properly alleges that the projects are individually 50
9 megawatts or greater. It explains that this is -- the
10 regulations that there is a calculation regarding net
11 generating capacity and it specifically sets forth what
12 that calculation will be.

13 Then there was information -- the
14 Commission -- the chairman ordered that the complaint and
15 request for investigation be served on Ormat. Based on
16 that investigation, staff submitted data requests and we
17 received -- and they received responses to those data
18 requests without that information being provided to the
19 complainant in this proceeding, until the September 15th,
20 which was less than two weeks ago, I think at this point.

21 Then the data requests that were asked -- I mean
22 certainly we're prepared to provide calculations, but it
23 does not make sense for the applicant to excoriate CURE
24 for not providing details on its generating capacity, more
25 details than merely setting forth broad numbers that are

1 in public documents, which we have done, while not
2 providing that information to the County, not providing
3 that to all parties in this proceeding, and then saying
4 that we're supposed to give them that level of detail.

5 So now that the information has been provided in
6 less than one week, we participate in the workshop to
7 openly discuss -- openly in the confidential sense of the
8 term -- all of the details that we are going to be
9 discussing today, so there's notice regarding the our
10 calculation of generating capacity.

11 And to the extent --

12 HEARING OFFICER CELLI: So you know --

13 MS. GULESSERIAN: -- there was no requirement
14 for a pre-filed. To the extent that we want to -- the
15 parties want to have pre-filed testimony, CURE is open to
16 doing that and will do that -- you know, prepared
17 testimony over the weekend, can do that today and is happy
18 to hold an evidentiary -- or participate in an evidentiary
19 hearing at a later time, so that they can ask some more
20 details on cross.

21 HEARING OFFICER CELLI: Let me just say this,
22 we're in the middle of an in-camera hearing. The
23 Committee is interested in what Mr. Marcus has to say and
24 what his calculation is and then we'll hear everybody
25 else's calculation.

1 But let's get to the confidential material now,
2 so we can go back on the record and have a public hearing.
3 So if we can get to the heart of that please.

4 So at this time, the objection is overruled
5 without prejudice for later briefing on it.

6 Go ahead.

7 MS. KLEBANER: Mr. Marcus, I'll ask you again,
8 did you independently review all the information and
9 documents in preparing your testimony?

10 MR. MARCUS: Yes, I did.

11 MS. KLEBANER: How did you measure the net and
12 maximum gross rating for the North Brawley project and the
13 East Brawley projects?

14 MR. MARCUS: I did it two different ways for each
15 of those units. First, based on having six OECs. OEC is
16 Ormat's acronym for an Ormat Energy Converter, and that's
17 the part of the device that actually produces the
18 megawatts.

19 The interconnection study done by IID, which is
20 an exhibit, but I don't have the number in front of me,
21 and the East Brawley DEIR, which is Exhibit 47, both say
22 that the project is going to have six OECs, so does
23 Exhibit 19 which is the January 2010 East Brawley revised
24 project description.

25 The second way I analyzed net and maximum gross

1 rating was based on five OECs rather than six, because
2 that's thousand project is described in confidential
3 documents 21809 and 21810 for North and East Brawley
4 respectively. Those are the heat and mass balance
5 diagrams.

6 In addition, confidential documents 21823, 21824,
7 and 21829 provide gross and net megawatt numbers for each
8 unit and they also show five OECs rather than six.

9 HEARING OFFICER CELLI: I'm sorry. The numbers
10 you just were using 2182 -- what are those?

11 MR. MARCUS: 21823, 21824, and 21829 those are
12 Ormat's unique identifiers for the confidential documents
13 that they provided to staff.

14 HEARING OFFICER CELLI: Oh. 218,
15 attachment -- is that what you meant?

16 MS. KLEBANER: May I respond?

17 HEARING OFFICER CELLI: Yes.

18 MS. KLEBANER: Elizabeth Klebaner for CURE. The
19 documents that are referenced by Mr. Marcus are in
20 Exhibits 203 and 204. Those exhibits are collections of
21 documents.

22 HEARING OFFICER CELLI: I know, but they were
23 parsed out. I can't remember by appendix or there was
24 some sort of subclassification that you had assigned it
25 and I need to know what he's talking about.

1 MS. KLEBANER: There was not an appendix. The
2 exhibits were assembled by the respondent. Each
3 individual document within each exhibit has a different
4 file name.

5 HEARING OFFICER CELLI: All right I'm looking at
6 203.

7 MS. KLEBANER: The best I could do is tell you
8 which of the two exhibits these documents come from.

9 HEARING OFFICER CELLI: So they're separated by
10 question number, right? I've got --

11 MS. POTTENGER: Hearing Officer Celli, you won't
12 be able to see the number identifier on the hard copies,
13 because it shows up on the electronic copies. So on the
14 CDs that we gave you, if you put the CD into your computer
15 and look at the file, you'll see the identifier at the
16 back of each file name. For example, I believe Mr. Marcus
17 just stated 21809 --

18 MS. KLEBANER: I can provide a list. Actually, I
19 have it here. The first document 21809 is in Exhibit 203
20 confidential question 1.

21 HEARING OFFICER CELLI: And I'll be able to -- so
22 Ms. Pottenger, when I look on the CD and see the document,
23 is this like a Bates stamp on it? What are we -- how will
24 I know what 21809 is?

25 MS. POTTENGER: I'm not sure what a Bates stamp

1 is? I apologize. Know it's the electronic identifier for
2 our law firm when our system document organizer. It
3 assigns an unique number to each document that shows up in
4 the file name when you save it electronically.

5 HEARING OFFICER CELLI: Is it a header our a
6 footer or --

7 MS. POTTENGER: You'll see it when you pull up
8 the disk and it shows the list of files on the disk. The
9 number is at the end of each document of file name.

10 HEARING OFFICER CELLI: Okay, thank you. I mean
11 I'm just going to ask that everybody be sensitive to the
12 fact that I have to go digging to find those things. And
13 when I look in the record and he's talking about 21809 in
14 a record that goes up to 206, that's hard on me.

15 MS. POTTENGER: Right. And for the record 21809
16 is, as Ms. Klebaner said, is Exhibit 203 in response the
17 question 1 and it's the North Brawley heat and mass
18 balance diagram. So when you're looking at the hard copy,
19 it's -- if you unfold it it's the really big piece of
20 paper compared to everything else.

21 HEARING OFFICER CELLI: Thank you. I'm sorry.
22 Sorry for the interruption, Ms. Klebaner. You can
23 continue.

24 MS. KLEBANER: Just to -- we would need to move
25 these documents into the record. They're not being moved

1 into the record by the respondent.

2 MS. POTTENGER: We've reserved the right to move
3 them into the record. We were -- our intent was to either
4 limit how many documents were moved in to help remove some
5 of the paper shuffle from here. So we wanted to see which
6 documents would be used by CURE, for example. And our
7 intent to -- was also to prevent actually the in-camera
8 hearing, so we wouldn't have to discuss these confidential
9 documents.

10 HEARING OFFICER CELLI: Can we finish this
11 testimony and then we'd be able to isolate what documents
12 they want to bring in and then perhaps we'll figure out
13 what needs to come in. Maybe we can reach a stipulation.

14 MS. POTTENGER: We believe that's a good
15 approach.

16 HEARING OFFICER CELLI: Okay. Let's continue,
17 Ms. Klebaner.

18 MS. KLEBANER: Mr. Marcus, I asked you to explain
19 how you measured the net and maximum gross rating for the
20 North Brawley project and the East Brawley project. And
21 you had responded that you had reviewed Exhibit 47, which
22 is the DEIR, is that correct?

23 MR. MARCUS: That's correct.

24 MS. KLEBANER: As well as the updated project
25 description dated January 2010, which you identified I

1 believe as Exhibit 19?

2 MR. MARCUS: That's correct.

3 MS. KLEBANER: Thank you. Can you please tell us
4 what other documents you used in making your measurement
5 analysis?

6 MR. MARCUS: As I said a moment ago, the first
7 way I did it was by looking at the case with six OECs.
8 And the documents that I relied upon to show that there
9 were six OECs were the ones you just talked about.

10 The second methodology I did was based on the
11 assumption of five OECs for each unit. And the documents
12 that I relied upon that show five OECs are oral
13 confidential documents, which I received all on a single
14 CD with unique identify areas for each document. And the
15 specific ones that refer to their being five OECs are
16 21809, 21810, 21823, 21824, and 21829.

17 There are a variety of other documents that in
18 calculating the actual megawatt numbers for the five OEC
19 case I referred to and will be citing later in my
20 testimony, and if you want I can name them all now?

21 HEARING OFFICER CELLI: Well, right now you've
22 identified for the five OECs 21809, 10, 23, 24, and 29.

23 MR. MARCUS: Those are just documents that show,
24 among other things, that there are plan to be five OECs
25 rather than six.

1 HEARING OFFICER CELLI: Is this five OECs at East
2 Brawley or North Brawley or both?

3 MR. MARCUS: Each. Five OECs at each and five
4 OEC ease at --

5 HEARING OFFICER CELLI: So you measured both at
6 six and both at five?

7 MR. MARCUS: That's correct. Those are the two
8 different methods I used.

9 HEARING OFFICER CELLI: All right. And so at
10 least the evidence you've given us so far is the basis for
11 your assumption of five or six?

12 MR. MARCUS: That's correct.

13 HEARING OFFICER CELLI: Okay. You can move on.

14 MR. MARCUS: So when I was analyzing the five OEC
15 case, I assumed that the various confidential documents
16 were all accurate, except to the extent that they
17 conflicted one another. And when there was a conflict,
18 for example showing the pump loads -- the auxiliary pump
19 loads at East Brawley were the same as the auxiliary pump
20 loads at North Brawley, even though amount of water being
21 pumped or the amount of brine being pumped were different.

22 Then I would generally assume that the North
23 Brawley information was more reliable, since North Brawley
24 has already been built. And then within the North Brawley
25 information, there was, I would assume, that the detailed

1 device information in confidential documents was more
2 reliable than more generic system level documents.
3 Whether there was a conflicts between the documents.

4 I then used those Ormat documents to determine
5 which part of the project, as planned by Ormat, was the
6 limiting factor on project output. You wouldn't expect,
7 and it's not the case here, that every single part of a
8 power plant is running exactly at hundred percent of its
9 capability when the power plant is running at a hundred
10 percent of its capability. Something is going to have a
11 little bit more capability and something is going to be
12 the limiting fact or. And so I went looking for where the
13 limiting factor was that would determine what the maximum
14 capability would be.

15 I then looked at the auxiliary loads that would
16 be associated with operating at that limiting point, and
17 from that got the associated net generation.

18 HEARING OFFICER CELLI: Any further question,
19 from CURE? And also, let's try to see if we can't focus
20 on the confidential documents -- the questions going to
21 the confidential, so we can open back up to a public
22 hearing again as soon as possible.

23 MS. KLEBANER: Okay. Can you please tell us, Mr.
24 Marcus, what were your principle assumptions?

25 MR. MARCUS: My principle assumption was that I

1 could rely on the documents from Ormat. I didn't make any
2 assumptions about changing their design, as described by
3 them. I refer to the documents by their unique identifier
4 numbers, and I'm assuming that they're not making any
5 changes either. If they say in the documents, for
6 example, that the plan is designed to have 13 brine pumps,
7 I'm assuming that that's what it could have had in the
8 case of North Brawley or that's what it will have for East
9 Brawley.

10 And, of course, there's a problem here. In
11 saying what's the maximum capability of East Brawley, the
12 real answer is we don't know, because it hasn't been built
13 yet. But necessarily, you have to answer the question
14 before the plant the built. The Energy Commission can't
15 decide after it's built whether it has jurisdiction. And
16 so I have to take their documents at face value as being
17 what they intended to do.

18 HEARING OFFICER CELLI: Right. And that's your
19 point, isn't it, that you took Ormat's documents at face
20 value? You didn't go below that and question the validity
21 of anything that was in the document?

22 MR. MARCUS: Well, to -- no, I did, to the extent
23 that the documents conflict with each other. But where
24 they conflict and where I'm saying I've used a different
25 number than in document X, my reason for doing so is

1 something in another Ormat document.

2 HEARING OFFICER CELLI: So you went with
3 the -- but as I understood you to say, you went with North
4 Brawley's documents, since they're up and running, and you
5 felt that that was more trustworthy than the East Brawley?

6 MR. MARCUS: Where there was a conflict between
7 them. Sometimes there are conflicts between different
8 North Brawley documents as to what a particular pump
9 rating is going to be.

10 HEARING OFFICER CELLI: How did you resolve that?

11 MR. MARCUS: There I resolved it by looking where
12 available at the more specific document. For example,
13 document 21810 is the overall plant mass balance. And it
14 has numbers on it for what the loads will be from various
15 auxiliary pumps.

16 But there are then individual documents for
17 individual categories of pumps for the brine pumps, for
18 the brine booster pumps, for the makeup water pumps, for
19 the blow-down pumps. And I would look at those individual
20 documents to see if they were consistent with what was in
21 document 21810.

22 HEARING OFFICER CELLI: Okay. And then how would
23 you resolve the inconsistency?

24 MR. MARCUS: Generally, by assuming the more
25 detailed document was the more accurate one.

1 HEARING OFFICER CELLI: All right. Thank you.
2 Go ahead.

3 MS. KLEBANER: Mr. Marcus, can you please
4 summarize your conclusions regarding the net generating
5 capacity of the North Brawley project?

6 MR. MARCUS: Yes. I conclude there are three
7 separate ways in which the North Brawley maximum net
8 capacity, as planned by Ormat, was over 50 megawatts.
9 They just have to do with first the number of OECs, second
10 the rate at which brine can be delivered to the OECs, and
11 third, the auxiliary loads associated with running at the
12 Ormat described design plant.

13 The first --

14 HEARING OFFICER CELLI: You said the number of
15 OECs, the rate of brine...

16 MR. MARCUS: And the third one is the auxiliary
17 load associated with operating at the Ormat described
18 design point.

19 HEARING OFFICER CELLI: Okay.

20 MR. MARCUS: With regard to first of those, the
21 number of OECs, Ormat has described North Brawley as being
22 a five OEC project that can produce 49.5 net megawatts.
23 Clearly, if you had a sixth OEC, the capability would be
24 bigger. And I refer you to Exhibit 2, Ormat's response to
25 CURE's complaint, where they talk about if you change from

1 five OECs to three -- they're talking about East Brawley,
2 but I believe the identical situation applies at both
3 units, that if you change from five OECs to three, a
4 two-fifths reduction in the number of OECs, then the gross
5 generation drops by exactly two-fifths and the net
6 generation drops by exactly two-fifths.

7 By the same logic, if you add a sixth OEC, you
8 would increase the gross generation by a fifth, and you
9 would increase the net generation by a fifth. And you
10 would end up at 59 megawatts.

11 HEARING OFFICER CELLI: If you don't mind, I kind
12 of want to get to the -- cut to the chase, as they say.
13 How many OECs are in North Brawley?

14 MR. MARCUS: Physically at the moment I believe
15 there are five but I'm actually not sure.

16 HEARING OFFICER CELLI: Okay. And do you know
17 whether there's any limitation on the number of OECs that
18 they can have at North Brawley by condition or otherwise?

19 MR. MARCUS: I believe -- I mean --

20 MS. KLEBANER: Will you please look at
21 exhibit --

22 HEARING OFFICER CELLI: I'm just -- I just was
23 trying to get to what's the current status quo? And it
24 sounds like there's five OECs currently in North Brawley.
25 Okay. And the question was whether Mr. Marcus was aware

1 of any limitation on increasing that number?

2 MR. MARCUS: My recollection is that they applied
3 for six. I don't have a document that can I cite you to
4 right now.

5 HEARING OFFICER CELLI: So all you know right now
6 is that there's five?

7 MR. MARCUS: That's correct.

8 HEARING OFFICER CELLI: Okay. That's fine. Ms.
9 Klebaner I'm sorry. Go ahead.

10 MS. KLEBANER: Mr. Marcus, you've reviewed
11 Exhibit 2, which a response to CURE's complaint, is that
12 correct?

13 MR. MARCUS: That's correct.

14 MS. KLEBANER: Exhibit 200 Appendix D identifies
15 the permitted components of the north and the
16 condition -- in the conditional use permit, the permitted
17 components are identified. Is that your recollection?

18 MR. MARCUS: I don't recall right now. I'd have
19 to refresh my memory by seeing the document.

20 MS. GULESSERIAN: May we approach the witness to
21 show him Exhibit 200, which is the answer to the
22 complaint.

23 HEARING OFFICER CELLI: Exhibit 200?

24 MS. GULESSERIAN: Yeah. That's answer to the
25 complaint. Appendix D, which he had listed and what he

1 had reviewed.

2 HEARING OFFICER CELLI: On page -- is there a
3 page number?

4 MS. GULESSERIAN: We're reviewing Appendix D
5 conditional use permit for the North Brawley facility.
6 And we're going to refer him to page seven of that
7 document.

8 HEARING OFFICER CELLI: Okay. You may approach
9 the witness to refresh his recollection, I guess.

10 MS. GULESSERIAN: According to the conditional
11 use permit, how many OECs is North Brawley permitted to
12 have?

13 MR. MARCUS: Six.

14 MS. GULESSERIAN: Thank you.

15 HEARING OFFICER CELLI: Just to -- I want to
16 acknowledge, it's 12:20. We haven't broke -- had a lunch
17 break yet. I kind of wanted to get through this
18 confidential stuff before we broke for lunch. So
19 can -- can -- do you have some sense of how long it's
20 going to take to get through the confidential information?

21 MS. KLEBANER: We expect a half an hour.

22 HEARING OFFICER CELLI: Okay. Well, let's see
23 what we can do to get through it.

24 MS. KLEBANER: Thank you.

25 Mr. Marcus, would you like to continue

1 responding?

2 MR. MARCUS: Yes.

3 HEARING OFFICER CELLI: So the question pending?

4 MS. KLEBANER: The question pending is please
5 summarize your conclusions regarding the net generating
6 capacity of the North Brawley project.

7 HEARING OFFICER CELLI: Okay.

8 MR. MARCUS: So the second method, as I'd said
9 before, was to look at North Brawley with five OECs as
10 described in the confidential documents.

11 And what they show is that the specific pumps,
12 fans, and other project components planned by Ormat have a
13 margin built into them, so that they're each capable of
14 handling operation at a somewhat higher level than the
15 design point shown in document 210. And specifically
16 document 21810 shows that 49.5 megawatt output is based on
17 a fuel supply of a 11.346 million pounds per hour of
18 brine.

19 When I look at the brine pump ratings, I see that
20 document 21838 shows the brine production pumps are rated
21 at 2,060 gallons per minute. The brine booster pumps,
22 which are in sequence after the brine production pumps are
23 rated at 2,000 gallons per minute per document 21831.

24 So the booster pumps are the limiting factor,
25 because even if the brine pumps were running at their full

1 power, the booster pumps can't pump that much.

2 So then the question is, what does 2,000 gallons
3 per minute mean in terms of pounds per hour? Document
4 21831 and questions at the technical workshop showed that
5 the expected density of the brine is 0.9. Water weighs
6 8.33 pounds per gallon. That's a commonly known number.
7 It's actually in their documents as well. Although, I
8 don't have a cite.

9 HEARING OFFICER CELLI: I'll take special notice
10 of it's about 8.4.

11 MR. MARCUS: So the brine pumping capacity is 13
12 pumps per document 21831, 2,000 gallons per pump the
13 design rating per document 21831, 8.33 pounds per gallon,
14 0.9 pounds of brine per pound of water, and 60 minutes per
15 hour, multiplies out to 11.695 million pounds per hour.

16 I actually asked about that multiplication during
17 the technical conference and was told that the arithmetic
18 was correct. When I compare that to Exhibit 21810, it
19 shows that the brine pumping capability is 3.08 percent
20 more than the design pumping quantity. So they -- the
21 49.5 megawatts requires 11.3 million pounds per hour, but
22 the pumps are capable of just under 11.7 million pounds
23 per hour.

24 North Brawley is a system that has three fluid
25 loops. Geothermal brine is pumped out of the ground,

1 circulated through the OEC and goes back into the ground.
2 Within the OEC isopentane is vaporized, run through the
3 turbine, and then condensed back and so on in a cycle.
4 And then water is used to cool the condenser.

5 So I next looked at the second one of those
6 loops, which involves the OEC. The OECs have a rating of
7 20 MVAs, megavolt amperes, and 16 megawatts gross output
8 each. And that's document 21815, which means that they
9 have a potential gross output from five of them of 80
10 gross megawatts.

11 But in the mode of operation that produces 49.5
12 net megawatts, the OECs are only producing 14.56 megawatts
13 each. That says that they're capable of producing 16
14 divided by 14.56, 9.89 percent more gross power than the
15 design point level.

16 But, in fact, they wouldn't produce ever 9.89
17 percent more, because you've got that pump limitation
18 earlier system that I just talked about that's 3.08
19 percent above design.

20 And so at that point in the analysis, the pumps
21 were still the limiting factor.

22 HEARING OFFICER CELLI: So when a manufacturer --
23 if I may just ask just to get clarification. So if a
24 manufacturer manufactures one of these OECs and says the
25 maximum is 14.5, even though this thing could run up to

1 16?

2 MR. MARCUS: No. It's the other way around. The
3 manufacturer says that the maximum is 16, but the design
4 for North Brawley says they're actually going to operate
5 it at 14.56 because of limitations on how much brine is
6 coming in.

7 HEARING OFFICER CELLI: Okay.

8 MR. MARCUS: And what I'm saying is, but they
9 could go three percent above the limitation that they've
10 shown and that would -- and that would not be -- the OEC
11 could handle three percent more brine. The OEC could
12 actually handle nine percent more brine as it turns out,
13 but it's not going to get nine percent. It's only going
14 to get, at best, three percent.

15 It could have been the other way. It could have
16 been that the one -- the brine pumps were sized bigger
17 than the OEC could handle. In that case, you could run
18 the OEC at a hundred percent of rating, but you couldn't
19 run the brine pumps at a hundred percent. It could be
20 extremely improbable that both of them, the hundred
21 percent point came at the exact same point that they were
22 each sized identically, so that neither one had any spare
23 capacity when the other one was at full capacity. In the
24 case of North Brawley, between those two, the constraint
25 was the OEC.

1 Then they looked at cooling water. Cooling water
2 design circulation is 184,000 gallons per minute. That's
3 from document 21810, when it's generating 49.5 megawatts.
4 But the specific documents for North Brawley, for the
5 cooling water pumps, which are document 21813 shows the
6 design is six cooling water pumps at 35,000 gallons each.
7 Six times 35 -- gallons per minute. Six times 35,000 is
8 210,000. And that's 14 percent above what they say they
9 need to get 49.5 megawatts. That's well above the
10 constraint from the brine pumps, so again cooling water
11 pumps capability is not the limiting constraint.

12 Then I looked at some minor components just in
13 case those might be acting as a constraint. You wouldn't
14 expect that, because you'd expect if you're spending a lot
15 of money on the big parts, you wouldn't design the big
16 parts -- you wouldn't design the small cheaper parts to
17 constrain your ability to use the big expensive parts, but
18 I did a little bit of checking anyway.

19 Documents 21819, 21821, and 21822 are each
20 documents at the detail level for North Brawley describing
21 the Level 1 and 2 vaporizers that convert isopentane from
22 liquid to gas. And those documents have a place in them
23 to show a design maximum throughput or a maximum
24 throughput constraint but that's not filled in on the
25 documents. And when I asked about it at the technical

1 workshop, they were unable to specify any specific
2 maximum.

3 Those vaporizers are actually part of the OEC.
4 They're a subcomponent of the OEC. And given that the OEC
5 as a whole is designed to support 16 megawatts gross, my
6 assumption absent any data either in the documents or from
7 the technical workshop, was that the vaporizers would not
8 act as a constraint.

9 And so my conclusion for North Brawley was that
10 brine pumping was the critical constraint and that it
11 would constrain them to a brine flow 3.08 percent above
12 the flow that would be needed, according to them, to
13 produce 49.5 megawatts.

14 Then question becomes, okay, if you're running at
15 the level that their brine pumps are designed to run at,
16 and you're moving 3.08 percent more brine through, how
17 much more power do you get?

18 And there my assumption has been that the
19 generating capacity would be proportional, that there
20 would not be any significant change in efficiency so that
21 more brine would equal more gross power, and would you get
22 an increase of 2.24 megawatts from the gross output of
23 72.8 megawatts that they show, plus the 3.08 percent that
24 they had be capable of doing with the equipment as
25 planned.

1 And I've talked to Mr. Koppe about the
2 engineering question there, about whether it's reasonable
3 to assume that a small change, three percent, would
4 produce a proportional change in output. But if you
5 increase the gross output, you're also going to increase
6 the auxiliary loads. You would need to run the brine
7 pumps a little bit harder, because they'd be running three
8 percent -- pumping three percent more, and you'd need to
9 run all the other auxiliary equipment a little bit harder.

10 So then the question is how much harder would it
11 -- the auxiliary equipment have to run, and what the
12 auxiliary load offset those two and a quarter megawatts
13 you would get from having three percent more gross output?

14 The mathematics is straightforward. They're at
15 49.5 at their design point. If they get three percent
16 more gross, the only way the net can end up below 50 is if
17 the auxiliary loads go up by seven and a half percent.
18 You need to have the auxiliary loads going up by 2.4 times
19 as much as the gross generation goes up by. And so now
20 the question reduces to will the rate of increase in
21 auxiliary loads be 2.4 times as big as the rate of
22 increase in gross generation?

23 And so now I looked at a comparison between East
24 Brawley and North Brawley. And they have basic three same
25 design. They're what I just described to you as having

1 first brine, then isopentane, then water. They're
2 different though in that the East Brawley design
3 uses -- sorry, the North Brawley design uses 9.3 percent
4 more fuel than East Brawley and produces five and a
5 quarter percent more power, not counting injection pumps,
6 which exist only at North Brawley and not at East Brawley.

7 So on a common basis North Brawley is nine
8 percent more fuel, five percent more power. And what that
9 says is that there is an inefficiency here. When you put
10 in nine percent more fuel, you don't get nine percent more
11 power. You get more power, but not the full amount. And
12 the ratio there of 5.25 over 9.31 is 0.564.

13 That's saying that when they go from the East
14 Brawley design to the North Brawley design, every percent
15 increase in output -- sorry, in fuel input produces 0.564
16 as much of an increase in net output. And in that case,
17 given the constraint of 3.08 percent more pumping that's
18 possible, 0.564 of that would be 1.74 percent.

19 And so my bottom line was that North Brawley, as
20 designed, would have been physically capable of producing
21 1.74 percent more than its design level of 49.5 megawatts,
22 which would be 50.36 megawatts.

23 HEARING OFFICER CELLI: 50.36?

24 MR. MARCUS: Correct.

25 HEARING OFFICER CELLI: Okay.

1 MR. MARCUS: Now the third thing -- I said there
2 were three things I did. The third thing I did was to
3 assume that the brine flow quantity was not three percent
4 bigger, that it was exactly the 11.346 million shown in
5 document 21810 and to assume that the gross generation was
6 not three percent bigger, that it was exactly the 14.56
7 megawatts per unit shown in document 21810.

8 And now look at the auxiliary loads and say would
9 those be as shown in document 21810?

10 And what I found was -- and here the key document
11 is document 21829. Document 21829 has two different sets
12 of numbers. On the left side of the page it has the
13 numbers that total up to 49.5 megawatts net generation
14 broken down at a fairly detailed by the individual
15 components that reduce the gross from 72.8 down to 49.5.

16 And on the right side of the page, it has a
17 description of what are called installed pumps.

18 HEARING OFFICER CELLI: I'm holding up a
19 document. It says East Brawley gross and net calculation
20 with a table underneath it. Is that what we're talking
21 about?

22 MR. MARCUS: Yes.

23 HEARING OFFICER CELLI: Okay. Thank you. I just
24 want to follow along.

25 MR. MARCUS: And it says --

1 HEARING OFFICER CELLI: And the page before
2 that -- actually two pages before that, is the one for
3 North Brawley?

4 MR. MARCUS: I'm on the North Brawley one.

5 HEARING OFFICER CELLI: Okay. So the bottom line
6 the net power 49.50?

7 MR. MARCUS: Well, they both come to 49.50
8 according to Ormat. But the North Brawley one starts at
9 72.80.

10 HEARING OFFICER CELLI: Right. Thank you. We're
11 looking at the same document then.

12 MR. MARCUS: So over on the right side of that
13 page, in my printout, are what is called supporting
14 details in its top left corner. And it has a series of
15 different items how many of them there are, the installed
16 motor horsepower per unit, the installed motor megawatts
17 per unit, and then prints on a separate page for me, the
18 total installed motor megawatts.

19 And for four of those items, I believe, the total
20 installed motor megawatts is less on the right side of the
21 page than what's shown on the left side of the page. And
22 that says that notwithstanding what they claimed when they
23 were making it all add up to 49.5, the actual hardware
24 they intended to purchase wasn't going to draw as much
25 parasitic load as what they're showing on the left side of

1 the page.

2 And the deviations are small, but they're not
3 zero. The first two items at the top -- no, the second
4 and third items on the left side of the page are the OEC
5 feed pumps and OEC auxiliary for a total of 3.83
6 megawatts.

7 We asked about the -- I asked about this at the
8 technical conference and I was told that those auxiliary
9 loads are included within the supporting details on the
10 right for the Level 1 and Level 2 feed pumps. At the
11 Level 1 and Level 2 feed pumps on the right are 2.237
12 megawatts for Level 1 and 1.305 for Level 2, which adds up
13 to 3.542 megawatts.

14 And so you've got a difference there that, in
15 fact, they're only planning to put in devices that drew
16 3.542 megawatts of power and thus couldn't consume 3.83 as
17 shown in the left side of the page. So the difference
18 there was 0.288 of a megawatt.

19 The makeup pump load farther down analogously the
20 left side of the page shows 0.24 megawatts but the right
21 side of the page shows 0.186. The cooling tower pump
22 load, the left side of the page shows 2.75, but the ride
23 side of the page shows 2.61.

24 And so you add up those, the assumption I made
25 here was that the plant would indeed function to operate

1 with the pumps that they were planning to actually buy.
2 And with that assumption, then the numbers are the right
3 would be the relevant numbers, not the ones on the left.
4 And substituting those constrained lower numbers on the
5 right, you'd have lower auxiliary loads and thus you'd
6 have higher net generation. And that's where I get the
7 figure that I already said to you -- or maybe I didn't
8 say, of 5.212 megawatts based on using the pumps that they
9 were actually -- and fans that they were actually planning
10 to buy.

11 HEARING OFFICER CELLI: You're saying that there
12 would be a reduction in auxiliary draw of 5.212?

13 MR. MARCUS: No, no. The reduction in the draw
14 would be 0.712. It's a very small effect. But the effect
15 of that reduction on the net generation, remember this is
16 assuming that their numbers on gross are correct. Since
17 using their numbers on gross, looking at their numbers on
18 auxiliary, changing those to 0.712 based on other
19 documents from Ormat themselves, and the effect of that
20 0.712 change is that the net generation would go up by
21 0.712 to 50.212.

22 HEARING OFFICER CELLI: Got it. Thank you.

23 MS. KLEBANER: Mr. Marcus, may I interject for
24 just one second. When referring to the installed feed
25 pumps on the right side of the page, could you restate for

1 us the number that you see on the document that you have
2 been referring to for the feed pumps that you've been
3 discussing?

4 MR. MARCUS: The Level 1 feed pumps are 2.237
5 megawatts. That's in the right most column. And the
6 Level 2 feed pumps are 1.305 megawatts.

7 MS. KLEBANER: Thank you.

8 MR. MARCUS: And those are collective numbers.
9 There are 10 Level 1 feed pumps and five Level 2 feed
10 pumps. There are two Level 1 feed pumps per each OEC and
11 there's one Level 2 feed pump for each OEC.

12 HEARING OFFICER CELLI: Thank you. Just checking
13 in with you. We've gone about 20 minutes since last I
14 checked in with you that we were going to get through this
15 in a half an hour, and my objective here is I want to
16 hurry and get back on a -- as a public hearing and out of
17 the in-camera hearing. So anything we can do to get the
18 confidential information into the record and behind us,
19 that would be great.

20 MS. KLEBANER: Okay. We'll do our best.

21 Mr. Marcus, can you please just summarize your
22 remaining conclusions?

23 MR. MARCUS: Well, that was it for North Brawley.
24 For East Brawley, again, I had three separate ways in
25 which I saw that the East Brawley maximum net capacity as

1 planned by Ormat was over 50 megawatts. First is the
2 number of OECs. The logic is identical to North Brawley
3 and I won't repeat it.

4 Second is the constraining component in the plant
5 design, which is different for East Brawley, so I'll have
6 to go through the details.

7 And third are the auxiliary loads
8 operated -- associated with operating at the Ormat
9 described design point.

10 So skipping over the OECs -- a number of OECs,
11 for East Brawley document -- confidential document 21809
12 shows the designed heat and mass balance that leads to a
13 claim total net output of 49.5 megawatts.

14 In this case, 49.5 megawatts, while it's the same
15 output, requires less brine to produce it. East Brawley
16 in document 21809 uses 10.38 million pounds per hour of
17 brine. That's eight and a half percent less than North
18 Brawley, even though its ultimate net output is going to
19 be the same.

20 HEARING OFFICER CELLI: Did you say it uses eight
21 and a half percent less brine?

22 MR. MARCUS: Right.

23 HEARING OFFICER CELLI: Okay. So the first thing
24 I wanted to look at was what would happen if the brine
25 supply were increased above that level?

1 And I tried to ask at the technical conference
2 what the maximum brine supply could be and what the brine
3 pumps would be capable of. And I was told repeatedly that
4 the plant components would be individually designed to
5 match the brine supply, even though the ultimate brine
6 supply wouldn't be known in advance of plant operation.

7 So my understanding of the Ormat position is that
8 while the plant is designed to be 49.5 megawatts, the
9 individual components haven't yet been designed, and so
10 their capabilities can't be described. And they went on
11 specifically and said that the brine pumps would be
12 designed after the development wells are dug and tested
13 and sized to individual well characteristics. And I took
14 that to mean that if the available brine supply is more
15 than 10.38 million pounds per hour, then the pumps will be
16 sized to deliver that greater amount of brine. So brine
17 supply wouldn't be a constraint. It will be whatever they
18 find after they dig the wells, which they don't know yet.

19 The OECs again for North Brawley, are rated at 20
20 MVA and 16 megawatts gross output. In that case I'm
21 relying on document 21815. But they're designed to
22 operate at 13.95 megawatts when East Brawley is producing
23 49.5 net. So their capability is 14.7 percent more gross
24 power than their design point output. So that would be
25 one possible constraint, the OECs.

1 Then I looked at cooling water. East Brawley,
2 like North Brawley, is designed to circulate 184,000
3 gallons per minute when producing 49.5 megawatts net. But
4 the DEIR, the Draft Environmental Impact Report, which is
5 Exhibit 47, says that the design includes cooling pumps
6 that are capable of moving 195,000 gallons per minute,
7 11,000 gallons per minute more than what is shown in
8 document 21809.

9 And similarly the project description that was
10 revised in 2010, that's Exhibit 34 Attachment 1, and the
11 specific number is shown on page 23, is 220,000 gallons
12 per minute.

13 HEARING OFFICER CELLI: Where was that from, what
14 exhibit?

15 MR. MARCUS: That's Exhibit 34, Attachment 1,
16 page 23.

17 HEARING OFFICER CELLI: Thank you.

18 MR. MARCUS: So those two documents are showing
19 that a pumping capability of six, technically 5.98, to 19
20 and a half percent above what is required to attain 49.5
21 megawatts of net output.

22 So that was a possible constraint on the maximum
23 generation. Again, I asked about maximum throughput of
24 the Level 1 and 2 vaporizers and heat exchangers. And
25 nobody at the technical conference identified those as

1 being a constraint on maximum output. And again, since
2 they're components of the OEC, they shouldn't -- if there
3 are constraints at all, they shouldn't be a constraint to
4 anything less than 16 megawatts gross per OEC.

5 So looking at the most constraining item, here
6 looks like it's possible to increase the cooling tower
7 evaporation rate, the makeup water delivery rate, and the
8 blow-down rate each by at least 8.7 percent, because
9 that's how much more those rates are for North Brawley
10 than for East Brawley in the designs, even though the
11 pumps sizes are identical.

12 So all the East Brawley pumps have to do is
13 perform identically to the North Brawley pumps and they're
14 capable of moving 8.7 percent more fluid. So the limiting
15 factor seems to be the cooling water pump capability of
16 195,000, which is six percent above what they say is
17 needed to produce 49.5 megawatts.

18 And so then I asked Mr. Koppe whether it was
19 reasonable to assume that you would get a proportional
20 increase in plant capability if -- well, actually, the
21 other way around, if you increase plant output by six
22 percent, would you increase the circulating cooling water
23 capability also by six percent? Would it be proportional?
24 And he said that was reasonable to assume.

25 So that means that the maximum net generation

1 capacities East Brawley would be 49.5 plus 5.98 percent is
2 52.46 megawatts.

3 HEARING OFFICER CELLI: 52?

4 MR. MARCUS: 46.

5 HEARING OFFICER CELLI: Thank you. There's also
6 an easier way to get to the same thing based on
7 confidential documents 21809 and 21810. Those documents
8 show that North Brawley differs from East Brawley in that
9 after the brine has gone through the power plant, at North
10 Brawley you need to actually consume electricity on the
11 pumps that will force it back into the ground. Not all of
12 the brine but most of the brine will need to be pumped
13 back into the ground.

14 The rest of the brine will flow back into the
15 ground through the reinjection wells under its own
16 pressure, because it's still it's 700 pounds per inch of
17 pressure after it comes out of the turbine.

18 At East Brawley, the assumption in document 21810
19 is that there will not need to be any power consumed for
20 reinjection pumps, so that that's the one design
21 difference in -- qualitative design difference in terms of
22 the equipment involved.

23 So if East Brawley were built with the exact same
24 designed as North Brawley, except for not needing
25 injection pumps, because the well field apparently is

1 different, then it would produce the exact same amount as
2 North Brawley, except that it wouldn't have the auxiliary
3 load for injection pumps. And that auxiliary load is 2.6
4 megawatts. So East Brawley ought to be able to produce
5 49.5 plus 2.6 equals 52.1 megawatts, even if it's built no
6 better -- you know, taking no advantage of what the
7 respondent said was the three year delay between one and
8 the other. But assuming no technological improvement, it
9 still ought to be 52.1 megawatts.

10 HEARING OFFICER CELLI: And you said that was
11 2. -- how much -- what was --

12 MR. MARCUS: 2.60 is the amount of pumping load
13 at North Brawley when the net is 49.5.

14 HEARING OFFICER CELLI: So that comes out of the
15 auxiliary load?

16 MR. MARCUS: That comes out of the auxiliary
17 load. That's part of the auxiliary load at North Brawley
18 but not at East Brawley.

19 HEARING OFFICER CELLI: Thanks.

20 MR. MARCUS: That's part of why North Brawley
21 uses eight and a half percent -- sorry, East Brawley uses
22 eight and a half percent less brine to produce just as
23 many megawatts even in the applicant's analysis.

24 Now, the third thing I did for East Brawley, like
25 the third thing I did for North Brawley, was to say assume

1 the applicant -- sorry. I keep saying applicant -- assume
2 the respondent is exactly correct about geothermal brine,
3 that they'll only have 10.38 million pounds per hour.
4 Their design level. Assume they're exactly correct about
5 gross. They'll only have 13.9 megawatts per OEC and not a
6 bit more.

7 Are their auxiliary loads going to be as high as
8 they say are? Because it's the auxiliary loads that bring
9 them from a gross generation of 69.75 down to 49.5. And
10 so I looked at the confidential documents for East Brawley
11 versus North Brawley, and what I saw was a whole series of
12 devices, pumps and fans, which have less work to do in the
13 East Brawley design than in the North Brawley design, but
14 are using the same or almost the same amount of power
15 according to Ormat's summary document.

16 For example, the cycle 2 pump loads in the OEC at
17 East Brawley are 1.92 percent lower than at North Brawley,
18 but the pressure they're dealing with is five percent
19 lower and the quantities they're dealing with are six
20 percent lower.

21 At the technical conference I asked about
22 qualitatively what's the direction of change and the
23 answer was when you increase pressure, pump load goes up.
24 When you increase quantity, pump load goes up. And so of
25 course the converse is true, if you decrease pressure, the

1 pump load goes down. If you decrease quantity, the pump
2 load goes down.

3 Now, at one point, they said that the pump load
4 change might vary with the cube of the flow change. So if
5 the flow went up by two percent to 1.02 of what it used
6 to be, that the amount of electricity you need to move
7 that 1.02 times as big flow, would be 1.02 cubed, which
8 would be around 1.06.

9 And so in that case, at OEC cycle 2 pump to have
10 a six percent reduction in flow, 1.06 cubed or 1 divided
11 by 1.06 cubed, because it says reduction, that would be a
12 17 percent reduction in how much pump power you need.

13 I didn't use that. I assumed it was only
14 proportional, that the gain from reducing the pump load
15 was no better than proportional. And in that case the
16 cycle 2 pumped load for East Brawley, since it's moving
17 six percent less quantity and giving no credit for the
18 fact that it's also at lower pressure, the required pump
19 energy would also be six percent less, and that would end
20 up being summed overall the cycle 2 pumps, you would save
21 53 kilowatts compared to what they show in their
22 confidential documents. That's assuming that the East
23 Brawley pumps function proportional to the North Brawley
24 pumps.

25 The same thing at cycle -- OEC cycle 1, again

1 I've written down all the numbers. The numbers are coming
2 from confidential documents 21809 and 21810. The numbers
3 shows that you're going to have a 9.3 percent lower
4 pressure and a 2.7 percent lower quantity, but the same
5 size pump, but you wouldn't need the run that pump at full
6 power at East Brawley -- or you wouldn't need to run it as
7 hard as East Brawley as you would at North Brawley. The
8 difference should be 63 kilowatts.

9 The blow-down pumps the same thing. The
10 blow-down quantity is eight percent less at East Brawley,
11 according to documents 21809 and 21810. It's actually
12 lower even than that. Here there was a conflict between
13 confidential document 21810 and Exhibit 19.

14 Exhibit 19 is the January 2010 revised project
15 description. And again the date on that is January 2010.
16 Exhibit -- or not exhibit but confidential document 21810
17 is the heat and mass balance diagram that they supplied
18 us. And it has a date on it of September 2008. So it's
19 16 months earlier than Exhibit 19. And Exhibit 19
20 specifically talks about how they've modified the design
21 to be more water conserving. And so I took this as
22 evidence that they had indeed modified the design to be
23 more water conserving.

24 If you look at the numbers in Exhibit 19, the
25 blow-down quantities are 29 percent less for East Brawley

1 than for North Brawley. If you believe what they said
2 about pump load varying with the cube of quantity, the
3 pump load would be 64 percent less. I only assumed it
4 would be 29 percent less. That would save them another
5 104 kilowatts at East Brawley compared to North Brawley.

6 Makeup water, it's the same thing. They say that
7 they will need -- in document 21810, they say they will
8 need a certain amount of makeup water that's 8.3 percent
9 less than North Brawley, and yet the pumping energy
10 required to move that water will be the same as North
11 Brawley.

12 In document 19, they show the makeup water is
13 actually even less than that. I actually did not adjust
14 for document 19. I see that as an oversight. Just using
15 what's in confidential document 21809, from 2008, moving
16 eight percent less water, less makeup water, assuming
17 that's only proportional and there's no other efficiency
18 gain, then the actual energy required at East Brawley
19 would be eight percent less than North Brawley, and that
20 would reduce the auxiliary load by 20 kilowatts from what
21 they've claimed.

22 Next was the cooling tower fan load. Again they
23 show the cooling tower fan load as being identical at East
24 Brawley, as compared to North Brawley, even though
25 quantity of water is 2,585 gallons per minute at East

1 Brawley per document 21810. The confidential documents
2 didn't show the amount of water that needs to be
3 evaporated at North Brawley. And they actually had a
4 mistake in the confidential documents about the amount of
5 water flowing into the cooling towers at North Brawley,
6 but we resolved that at the technical conference, both the
7 correction to the input, and the -- getting a number for
8 the quantity evaporated.

9 Quantity evaporated at North Brawley is 2,825
10 gallons per minute per the technical conference, and that
11 again is an eight and a half percent difference. And so
12 if you're evaporating eight and a half percent less water,
13 and if that's proportional to the amount of fan power you
14 need, then you would save 217 kilowatts on East Brawley
15 fan load compared to the North Brawley fan load.

16 Finally, the brine pumps, there they do show a
17 difference. On the brine pumps they show that the East
18 Brawley brine pumps would use three and a half percent
19 less energy for auxiliary loads than the North Brawley
20 brine pumps. That's brine production and boost pumps put
21 together.

22 The brine temperatures and pressures are
23 identical at East Brawley and North Brawley, that's shown
24 in the confidential documents. Ormat said again that pump
25 load should -- they said it the other way around. They

1 said pump loads should go up with pump quality --
2 quantity, but the converse is true that pump load should
3 go down with pump quantity.

4 Again, ignoring the possible cube effect and
5 assuming only a proportional reduction, an eight and a
6 half percent reduction in flow would be an eight and a
7 half percent reduction in the auxiliary load. But they've
8 only assumed a 3.47 percent reduction. And the difference
9 between what they've assumed and what they ought to
10 actually be getting is 510 kilowatts.

11 You sum those all up and you get 967 kilowatts of
12 auxiliary load that they're showing in East Brawley that's
13 inconsistent with what they show for auxiliary load for
14 North Brawley. And then there's one final adjustment,
15 they show calculations on, I believe this is, Exhibit
16 21829, that when you change the auxiliary load, you also
17 change the electrical losses associated with supplying
18 that auxiliary load. That in turn changes the net load.
19 And when you change the net load, you change the
20 electrical losses associated with the transformer that
21 actually delivers the net load out to the purchaser.

22 And the net effect of those two changes is that
23 every megawatt or kilowatt change in auxiliary load,
24 they'll be a further 0.7 percent change in the electrical
25 losses associated with that auxiliary load. So those

1 things I've identified in detailed produce a total of 967
2 kilowatts of reduced auxiliary load. You'd get another
3 seven kilowatts of reduced losses. The total would be 974
4 kilowatts of reduced auxiliary load. And since I've been
5 assuming all through this that the gross load is as said
6 by the respondent, then you a 974 increase in the net
7 load, 49.5 plus 0.974 equals 50.474 megawatts.

8 HEARING OFFICER CELLI: That's East Brawley?

9 MR. MARCUS: That's East Brawley measured by
10 looking just at the auxiliary load side.

11 Now, you could imagine more complex ways where
12 you looked at two of those taken together, but all that
13 would do is increase the numbers. What I'm showing is
14 each of these three ways taken separately produces a net
15 rating above 50.

16 HEARING OFFICER CELLI: That last one was 50.74?

17 MR. MARCUS: No, 50.47, sorry.

18 HEARING OFFICER CELLI: Okay.

19 MS. KLEBANER: Mr. Marcus, based on the materials
20 you've reviewed, are you able to say whether Ormat refined
21 its design over time, so that OEC capability has improved
22 and the efficiency has also improved?

23 MR. MARCUS: Yes. Exhibit 21809 shows the brine
24 quantity, temperature and pressure that go into the plant.
25 And from that you can calculate the BTU that are going

1 into the plant. And that's actually done by the
2 applicant, and the number that results is shown in
3 document 21825, where they show 11.346 million pounds per
4 hour of brine at 335 degrees and 306.6 BTU per pound will
5 produce 3478 million BTU per hour of energy going into the
6 OEC.

7 And then in document 21810, they have the same
8 parameters for East Brawley. The temperature and pressure
9 are identical. The quantity is 8.51 percent less and so
10 the energy will also be 8.51 percent less. But -- or
11 saying it the other way around saying North Brawley as
12 a -- no, no, I'm sorry that's the way I said it. On the
13 output side though, looking at gross efficiency the output
14 at North Brawley according to confidential document 21809
15 is 14.56 megawatts. And the output at East Brawley is
16 13.95.

17 So the East Brawley design is producing 95.9
18 percent as many gross megawatts, even though it only has
19 91.5 percent as much BTU going in. And that shows that
20 the heat rate or the efficiency measured in megawatts out
21 per BTU in is better at East Brawley than North Brawley.
22 And I'm assuming that's due to change in OEC design.

23 On the net side, you can see it even more
24 directly that the East Brawley design is 49.5 net
25 megawatts when it's getting 10.38 million pounds per hour

1 of brine. The North Brawley design with the same
2 components, without the auxiliary load for injection pumps
3 would produce 52.1 megawatts. So you would get at East
4 Brawley 95 percent as much net generation with 91.5
5 percent as much BTU in.

6 So both the net generation, and the gross
7 generation ratio of energy into megawatts out are better
8 for East Brawley than they are for North Brawley. And
9 then non-confidentially, Exhibit 44 talks about how
10 they've changed the design of the OECs over time to go
11 from 12.5 megawatts gross to 16.5 megawatts gross, which
12 is actually higher than the 16.0 megawatts shown in the
13 North and East Brawley documents that I've been talking to
14 up till now.

15 MS. KLEBANER: Mr. Marcus, are there any design
16 timing differences between North Brawley and East Brawley
17 that leads you to conclude that East Brawley might be more
18 efficient?

19 MR. MARCUS: Yes. Besides the changes in
20 efficiency that you already see in the design, there's the
21 basic fact that the detail design for East Brawley hadn't
22 yet happened. And so at the point when they do detailed
23 design, they'll always have the choice of using the
24 identical technology to what was used in North Brawley.
25 People don't forget how to build pumps that can do certain

1 things.

2 They may have the option of more efficient
3 designs that have been developed over time since North
4 Brawley. And so it's a one way effect. You can get more
5 efficient, but you can't get less efficient. And so that
6 leads me to believe that if there's going to be a change,
7 it will be in the direction of more efficiency, and thus
8 more output per BTU in at East Brawley than at North
9 Brawley.

10 And I again remind you that the confidential
11 document 21809, which is the East Brawley design point
12 dock -- I'm sorry, 21810, which is the East Brawley design
13 point document, is a September 2008 document and doesn't
14 reflect whatever design changes there may have been since
15 then.

16 MS. KLEBANER: Thank you, Mr. Marcus. No further
17 questions.

18 HEARING OFFICER CELLI: Now, at this time, ladies
19 and gentlemen, it's five minutes after 1 o'clock. We're
20 an hour past what we said we would break for lunch and
21 some change. What I think we'll do is take a break at
22 this time, so people can get a little something to eat and
23 then we would begin the cross-examination of Mr. Marcus by
24 respondent at 1:30, if everyone could be -- you know, go
25 up grab a lunch, grab a sandwich, come on -- bring it back

1 here, even though I know that we're not supposed to be
2 eating it here. I think we need to just to keep on track.

3 So if we can do that. Everybody knows where to
4 go. Go ahead and -- first Mr. Ellison.

5 MS. KLEBANER: Hearing Officer Celli, I just want
6 the make one suggestion or recommendation. Could we have
7 our expert Robert Koppe do his direct, so that we can be
8 done with the confidential portion of the hearing and then
9 do cross for Marcus and Koppe after that?

10 HEARING OFFICER CELLI: Both. That works for me.
11 Does that work for you Mr. Ellison?

12 MR. ELLISON: When you say done with the
13 confidential portion, are we talking about being done with
14 all of the testimony or is there more beyond this
15 confidential?

16 MS. KLEBANER: We would be done with our direct.

17 MR. ELLISON: Great. Okay. And do you have a
18 time estimate for Koppe?

19 MS. KLEBANER: About 15 minutes for direct.

20 MR. ELLISON: Okay. We have no objection to
21 that. I would -- what I had my hand up about was that
22 throughout his testimony, Mr. Marcus was referring to a
23 document. And we would like to see it.

24 HEARING OFFICER CELLI: The 218 et ceteras
25 were --

1 MR. ELLISON: No, no, no. The document that he
2 was holding up and almost reading from, we would like to
3 see that document and we are entitled to see a document
4 that a witness is takes to the stand and looks at it.

5 HEARING OFFICER CELLI: Maybe we need to have
6 that marked. What is it?

7 MS. KLEBANER: It's Mr. Marcus's notes. We have
8 no problem moving that and providing a copy of that to
9 respondent.

10 HEARING OFFICER CELLI: I would ask that you mark
11 it next in order and that would be 52.

12 MS. KLEBANER: That's correct. I would move it
13 into the record as Exhibit 52.

14 HEARING OFFICER CELLI: Well, let's just mark it
15 for identification for starters and then let the parties
16 look at it and see if there's any objection, whether it
17 needs to be in the record at all.

18 MS. KLEBANER: Yeah. We don't necessarily think
19 it needs to be in the record, but during this half hour
20 break we'd like to be able to look at it.

21 HEARING OFFICER CELLI: That's fair enough. So
22 can I just take a moment and mark Exhibit 52 and what are
23 we calling that? What's the title of that document and
24 the date?

25 MS. KLEBANER: Notes of Mr. Marcus dated --

1 HEARING OFFICER CELLI: How many pages?

2 MR. MARCUS: Thirteen, I believe. It may have
3 changed in the printing.

4 MS. KLEBANER: No, 13. You got the math right.
5 Thirteen pages and the title of the document the David
6 Marcus opening foundational examination.

7 HEARING OFFICER CELLI: Okay. I wonder if we can
8 prevail upon staff. You know, I hate to do this, but
9 since your offices are in the building to get copies for
10 all the parties. And if you wouldn't mind, Ms. Klebaner,
11 on the upper right-hand corner of the page one of the
12 document write EX period 52. And that's on the upper
13 right hand corner of the thing. Okay. Good, because it
14 looked like the left from over here.

15 And then if everybody can get a copy of that
16 during the break so that the parties can review it. I
17 have a question for Mr. Wilkins.

18 (Thereupon Complainant's Exhibit 52 was
19 marked for identification.

20 MR. WILKINS: I'd like to clarify, because my
21 witnesses haven't been able to listen to the testimony,
22 but it appears that all of CURE's testimony will be based
23 on confidential information and there will be no testimony
24 that they will hear on an unconfidential basis, is that
25 correct?

1 HEARING OFFICER CELLI: It sounds that way.

2 MR. WILKINS: And I guess the follow-up to that
3 is, is the cross going to be in relation to confidential?
4 I'm trying to get an estimate for when I can tell my
5 witnesses they'll be able to listen in and whether they're
6 going to actually be able to hear any of the testimony
7 from CURE witnesses, which it appears they will not. But
8 I just want the get a clarification on that.

9 HEARING OFFICER CELLI: You're starting to see
10 why we don't like to deal with confidential documents in
11 general, because they create a whole can of worms for
12 everybody. Yes, there needs to be cross-examination on
13 confidential documents, because that's the whole basis for
14 all of the direct examination so far.

15 And the parties will have to be able to cross on
16 that. And it doesn't sound to me like we're going to
17 probably have public -- go public again until the close of
18 the complainant's case in chief based on what we've heard
19 so far.

20 So I think you're right about that. And because
21 of that, I wonder if we need to give the call-in number to
22 the County of Imperial's witnesses, so they can call in.

23 And County of Imperial, your witnesses have
24 nothing to speak to with regard to the confidential
25 documents?

1 MR. WILKINS: I think not. But the problem I
2 heard is that a number of references to the Draft EIR, the
3 county's permitting conditions and my witnesses were not
4 able to hear that testimony. To the extent there are
5 corrections that need to be made to the record, it would
6 be very difficult to relay what those are without
7 divulging confidential information. I'm finding myself in
8 a --

9 HEARING OFFICER CELLI: You're right, but the EIR
10 should speak for itself. I mean that's a document. We
11 have that. That's coming in. No problem. So I
12 understand your predicament. It's just -- it's an
13 unfortunate out fall of this confidential document's
14 problem that we have. And I appreciate your indulgence,
15 but I don't think it's appropriate at this time to include
16 those witnesses in. They're not part of the NDA.
17 It's -- it creates more problems. I think what we have is
18 we've got a situation that's contained for the moment.
19 Let's see if we can't work within this prophylactic
20 scenario we've created.

21 MR. WILKINS: It. And I would agree that it's
22 not appropriate. They're not parties to the NDA. The
23 only question I guess I have is, I can't tell them about
24 the CURE testimony largely. And when will I be able to
25 tell them they actually can join -- or they should expect

1 to be called in? And will they be able to hear any of the
2 direct testimony from Ormat's witnesses?

3 HEARING OFFICER CELLI: I believe they would, but
4 we'll hear from Ormat on that. I think that the right
5 thing to do -- we have to close the in-camera proceeding
6 before we can tell you. And I was thinking that would
7 have been done about an hour ago, but you know how these
8 go.

9 MS. POTTENGER: Hearing Officer Celli, we
10 would -- or suggest -- one suggestion would be that once
11 we end the in-camera hearing, perhaps Mr. Marcus could
12 repeat the portion of his testimony solely relating to the
13 Draft EIR or other permit conditions for the benefit of
14 the county so that way they can hear it and respond to it
15 on their direct, if needed.

16 HEARING OFFICER CELLI: Sure. That would be
17 reasonable. I don't think there would be an objection to
18 that or perhaps he can communicate it to the attorneys and
19 they can communicate it to your witness.

20 So with that, if there's nothing further from any
21 of the parties, I'd like to break and return at 1:30
22 sharp. Please be in your seats. This is still an
23 in-camera hearing. Only the people who are here now
24 should return. And we'll resume at 1:30. So we'll see
25 you at 1:30.

(Thereupon a lunch break was taken.)

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1 MS. KLEBANER: Good afternoon. Please state your
2 name for the record.

3 MR. KOPPE: Robert H. Koppe.

4 MS. KLEBANER: We need the swear Mr. Koppe in

5 HEARING OFFICER CELLI: We need to swear Mr.
6 Koppe in.

7 Whereupon,

8 ROBERT KOPPE

9 was called as witness herein, and after first
10 having been duly sworn, was examined and
11 testified as follows:

12 THE COURT REPORTER: Could you please state and
13 spell your name for the record?

14 MR. KOPPE: Robert H. Koppe. That's K-o-p-p-e.

15 MS. KLEBANER: Thank you. Mr. Koppe, are you the
16 conclusions that you provide today your own?

17 MR. KOPPE: Yes.

18 MS. KLEBANER: Please summarize your
19 qualifications, education, and experience -- professional
20 experience?

21 MR. KOPPE: I received a BS in wood products
22 engineering from the State University of New York, College
23 of Forestry in 1965. I received an MS in nuclear power
24 plant engineering from The Ohio State university in 1966.

25 HEARING OFFICER CELLI: Let me interrupt for a

1 moment. Is -- what exhibit is Mr. Koppe's resume or CV?

2 MS. KLEBANER: Yes. Exhibit 49 is the resume and
3 experience of Robert Koppe.

4 HEARING OFFICER CELLI: And he's -- you're
5 calling him to testify as an expert in what?

6 MS. KLEBANER: Engineering, consistent with what
7 we provided in our prehearing conference, would be the
8 generating statement -- would be the generating capacity
9 and plant load and the net generating capacity of the East
10 Brawley North Brawley projects.

11 HEARING OFFICER CELLI: So I'm trying to
12 abbreviate our proceedings. First, I'll ask the
13 respondent whether there's any objection to -- to finding
14 that Mr. Koppe an expert engineer in generating capacity,
15 plant load, and net -- what was the third thing, net?

16 MS. KLEBANER: Net generating capacity.

17 HEARING OFFICER CELLI: Net generating capacity.
18 First respondent any objection?

19 MR. ELLISON: I'm sorry. You're referring to Mr.
20 Marcus?

21 HEARING OFFICER CELLI: No, now this is Mr.
22 Koppe. They're going to -- they're going to do a direct
23 examination of Robert Koppe. And rather than take all of
24 his qualifications, which are in Exhibit 49, I was going
25 to see if the parties would be willing to stipulate that

1 he's an expert in the areas of engineering, vis a vis
2 generating capacity, plant load and net generating
3 capacity.

4 MR. ELLISON: Let me ask him the same voir dire
5 questions.

6 HEARING OFFICER CELLI: Please go ahead.

7 VOIR DIRE EXAMINATION

8 BY MR. ELLISON:

9 Mr. Koppe, this is Chris Ellison. I'm
10 representing Ormat in this proceeding. Can you hear me?

11 MR. KOPPE: Yes.

12 HEARING OFFICER CELLI: That was a yes.

13 MR. ELLISON: Oh, I'm sorry. I didn't -- Mr.
14 Koppe, are you an expert in the assessment of geothermal
15 resources?

16 MR. KOPPE: No.

17 MR. ELLISON: Have you worked -- have you been
18 employed as the operator or manager of a geothermal power
19 plant?

20 MR. KOPPE: No.

21 MR. ELLISON: Have you been employed by the owner
22 of a geothermal power plant?

23 MR. KOPPE: No.

24 MR. ELLISON: That's all I have. Thank you.

25 HEARING OFFICER CELLI: So do you --

1 MR. ELLISON: Yes, we'll stipulate on the three
2 points that were you suggesting.

3 HEARING OFFICER CELLI: Thank you. Staff, the
4 same stipulation, that he's an expert in generating
5 capacity, plant load, net generating capacity as an
6 engineer?

7 STAFF COUNSEL OGATA: Yes, we'll stipulate to
8 that.

9 HEARING OFFICER CELLI: Thank you. And County of
10 Imperial.

11 MR. WILKINS: County of Imperial will stipulate
12 also.

13 HEARING OFFICER CELLI: Thank you.

14 MR. KOPPE: I'm having a really hard time
15 hearing. There's a lot of crinkling.

16 HEARING OFFICER CELLI: Okay. I'm sorry. What
17 actually I'm going to ask that we do is --

18 MR. KOPPE: Not to mention sputtering.

19 HEARING OFFICER CELLI: Let's turn off that
20 microphone. If you could press the button out turn out
21 the green light, Mr. Marcus. Thank you.

22 Oh, you got the one that never turns off, okay.
23 Can you hear me okay, Mr. Koppe?

24 MR. KOPPE: Yes, that's better.

25 HEARING OFFICER CELLI: Okay. And we can hear

1 you just fine. So I'm going to ask that the parties speak
2 directly into your microphone, so that you're microphone
3 looks like an extension of your tongue.

4 (Laughter.)

5 HEARING OFFICER CELLI: Be about two inches away
6 from the microphone.

7 MR. KOPPE: I'm having a hard time with that
8 image, but go ahead.

9 HEARING OFFICER CELLI: Okay. So CURE please
10 speak directly into your microphones and direct is with
11 CURE.

12 CONTINUED DIRECT EXAMINATION

13 BY MS. KLEBANER:

14 I just want to make one correction for the
15 record. I believe I said that the resume for Dr. -- or
16 rather for Mr. Koppe was attached to our prehearing
17 conference statement. Actually, the resume of Mr. Koppe
18 is provided as exhibit --

19 HEARING OFFICER CELLI: I said Exhibit 49.

20 MS. KLEBANER: Exhibit -- okay. Thank you.
21 Yeah, Exhibit 49.

22 HEARING OFFICER CELLI: Is it Exhibit 49?

23 It says qualifications and experience of Robert
24 Koppe.

25 MS. KLEBANER: Yes, Exhibit 49.

1 HEARING OFFICER CELLI: Then we're good to go.

2 MS. KLEBANER: Okay. Yeah, sorry about that.

3 Mr. Koppe, please describe what California Unions
4 for Reliable Energy asked you to do?

5 MR. KOPPE: I was asked to review Exhibits 203
6 and 204 and the information provided at the workshop last
7 Thursday. I believe that was the 22nd.

8 MS. KLEBANER: Thank you. What was your
9 methodology in performing your analysis and review?

10 MR. KOPPE: I read and/or listened to the
11 information. I compared the information in
12 various -- from various sources for internal consistency
13 and I also reviewed it for consistency with my experience.

14 MS. KLEBANER: Have you performed this sort of
15 analysis before with respect --

16 MR. KOPPE: Yes.

17 MS. KLEBANER: -- with respect to the generating
18 capacity of power plants?

19 MR. KOPPE: Yes. Yes. I've looked at the
20 efficiency and the capacity of many, many power plants.

21 HEARING OFFICER CELLI: And he's qualified as an
22 expert, so we don't need to go there.

23 MS. KLEBANER: Okay. Can you please summarize
24 your conclusions?

25 MR. KOPPE: Yes. Ormat claims that East Brawley

1 will only be able to generate 49.5 megawatts net. And
2 that conclusion is based on two propositions. One is that
3 the facility will only be able to generate 69.75 megawatts
4 gross. And that when it's generating the 69.75 megawatts
5 gross, it will need to use 19.62 megawatts for auxiliary
6 loads and another 0.63 megawatts for electrical losses.

7 And what I found is that, first, if the facility
8 has more supply of brine than what Ormat assumed in its
9 heat balance, then it should be able to generate at least
10 three to five more megawatts gross than the amount the
11 69.75 megawatts by Ormat.

12 And then my other conclusion is that even when
13 it's operating at 69.75 megawatts gross, the facility
14 should require at least one or two megawatts less
15 auxiliary load than the 19.62 megawatts claimed by Ormat.
16 So if you just take account of the ability of the facility
17 to accept more heat from brine, then it would operate --
18 even with the auxiliary loads claimed by Ormat, it would
19 operate above 50 megawatts. And even if you accept that
20 it can't get anymore brine than the 20 -- anymore heat
21 from brine than they claim, because the auxiliary loads
22 would be lower than what they claim the net electric
23 output would still be greater than 50 megawatts.

24 MS. KLEBANER: Can you please explain a little
25 bit your analysis regarding the gross output of the East

1 Brawley facility?

2 MR. KOPPE: Yes. Ormat claims that the maximum
3 flow of brine to the facility will be 10,380,000 pounds
4 per hour. And based on that flow and the expected
5 temperature and pressure of the brine. They calculate
6 that the plant will produce 69.75 megawatts gross.

7 I looked through the various pieces of equipment
8 in the plant, such as the pumps and the fans, and the
9 turbine generator, and there was not complete information
10 on all those pieces of equipment. But to the extent I
11 could find information, it appears that all of those
12 components could operate at close of at least five to ten
13 percent more than is required to generate the 69.75
14 megawatts.

15 And so if, for example, you just assume five
16 percent increase in brine flow, that would result in a
17 increase in gross electric power of about five percent.
18 And that would increase the gross generation from 69.75
19 megawatts to 73.24 megawatts.

20 So in the conversations we had last Thursday,
21 Ormat appeared to be claiming that if one increased the
22 brine flow and the other flows within the plant by
23 something, say five percent, that the, auxiliary power
24 consumption would increase by the cube of 1.05 until you
25 get a 15 or a 16 percent increase in auxiliary power

1 requirements. And that that would cancel out all or
2 almost all of the increase in gross generation.

3 And -- so this seems to be based on -- well their
4 overall claim to the unit can't operate at more than the
5 69.75 megawatts appears to be based on a combination of
6 two things. One is their -- or on two separate things.
7 One is they claim that the pumps are designed to pump
8 exactly the amount of fluid needed to make 69.75 megawatts
9 and they can't do anymore. And that even if the pumps
10 could pump more flow, because of this exponential increase
11 in auxiliary power usage as the flows increase, that there
12 would be no increase in net generation.

13 MS. KLEBANER: With respect to the first point
14 can you please respond to Ormat's claim regarding the
15 maximum amount that the pumps can handle?

16 MR. KOPPE: Yes. Ormat hasn't given us any
17 design data for the pumps in East Brawley, and, in fact,
18 they've said that they haven't actually designed them yet,
19 but they did provide a design data for some of the pumps
20 in North Brawley.

21 And since they make the same claims for both
22 North Brawley and East Brawley, I've looked at the pumps
23 for North Brawley. And I found three things. First, that
24 for at least for most of the pumps, the pumps were
25 designed to produce more flow than what is called for in

1 the heat balance.

2 Secondly, that the pumps are capable of producing
3 more flow than what they were designed for. So they're
4 designed to produce somewhat more than what's called for
5 in the heat balance. They can actually produce even more
6 than that. Moreover, the motors for the pumps are
7 substantially oversized. So it appears that the pumps can
8 all pump considerably more flow than what they need to
9 pump in order to make the 69.75 megawatts gross.

10 MS. KLEBANER: Can you provide any comment
11 regarding the motors that drive the pumps?

12 HEARING OFFICER CELLI: Ms. Klebaner.

13 MR. KOPPE: Yeah. The -- as I said, the motors
14 are generally oversized which is pretty standard practice.
15 So, for example, if a particular pump is designed to pump
16 3,000 gallons a minute and need 200 horsepower, the pump
17 can really pump more than 3,000 gallons per minute
18 admittedly using somewhat more horsepower. But the pump
19 will be provided with a motor that will produce 325 or 350
20 horsepower.

21 So the motors -- the motor on the pump will have
22 the capability to drive the pump at a level that will
23 produce more flow than the pump was designed for, and that
24 is in turn more than what is needed for the 69.75
25 megawatts gross.

1 MS. KLEBANER: So could you please restate your
2 conclusion taking together the design of the pumps, the
3 capability of the pumps, and the motors that drive the
4 pumps?

5 MR. KOPPE: Yes. The overall conclusion is that
6 the equipment in the plant is capable of pumping more
7 brine and more water than -- and more isopentane than what
8 is needed to make 69.75 megawatts gross. And in fact, you
9 should be able to make at least three or four or five
10 megawatts gross more than that.

11 It might well be able to go up to the 80
12 megawatts gross.

13 MS. KLEBANER: I'm sorry. Could you repeat that
14 last --

15 MR. KOPPE: I might well be able to go up to the
16 80 megawatts gross that the generators are designed for.

17 MS. KLEBANER: Thank you. Has Ormat identified
18 any difference between North Brawley and East Brawley that
19 would lead you to conclude differently?

20 MR. KOPPE: I reviewed the documents in the two
21 exhibits and then listened to the workshop discussion on
22 Thursday, and I did not see or hear of anything that would
23 indicate that there's a difference between North Brawley
24 and East Brawley that would change that conclusion.

25 MS. KLEBANER: Would you be able to -- strike

1 that.

2 Next question for you Mr. Koppe is can you please
3 respond to your second overarching point regarding
4 respondent's claim about what would happen to the net
5 generating capacity of the East Brawley facility, if the
6 brine flow were increased?

7 MR. KOPPE: Yeah. Basically, they're
8 saying -- well I'll just do this in terms of a five
9 percent increase in brine flow. But you could substitute
10 any other number and it would get the same discussion,
11 which is -- and let me just say let's just round off the
12 numbers. So we'll say that the facility at the flows in
13 the heat balance will generate about 70 megawatts gross.
14 And they'll use about 20 megawatts of that for auxiliary
15 loads leaving it a little less than 50.

16 If you increase the brine flow five percent,
17 you'll get roughly an increase in gross electric output at
18 five percent. The efficiencies of turbines are generally
19 quite flat, that is to say they're pretty constant with
20 load at or near the maximum load. So you expect that a
21 five percent increase in brine flow, which would be a five
22 percent increase in isopentane flow, would give you
23 increase in gross electric output. And five percent at 70
24 megawatts is three and a half megawatts.

25 So Ormat seems to be saying that might happen,

1 but even if it did happen, there would be an increase in
2 auxiliary lower usage of about three and a half megawatts
3 and that would cancel out the increase in gross power
4 generation and you'd still only have a 49 and a half net
5 megawatts.

6 MS. KLEBANER: What is your response to that
7 claim?

8 MR. KOPPE: The -- you know, for that to be the
9 case, if that's an increase in the auxiliary load of 17.5
10 percent. So they're basically claiming that a -- a five
11 percent increase in flows will result in a 17 and a half
12 percent increase in auxiliary power usage.

13 And that just isn't realistic. The thing that to
14 me is most compelling is, you know, I've looked at
15 hundreds of steam power plants and looked at how auxiliary
16 loads -- and those plants, while they're different in
17 detail obviously from a geothermal plant, they -- most of
18 the auxiliary power is used running motors that run pumps
19 and fans.

20 And when you increase the flows and therefore the
21 electric output, in these plants by whatever five or 50
22 percent, the useful auxiliary power increases by roughly
23 the same percent. So you increase the flows by five
24 percent, and the auxiliary power increases about five
25 percent. You increase the flows by 50 percent the

1 auxiliary power increases by 50 percent.

2 MS. KLEBANER: Thank you. Setting aside the
3 issue of the fuel input, can you please summarize your
4 analysis and conclusions regarding the auxiliary load for
5 the East Brawley facility?

6 MR. KOPPE: Yeah. So the -- I believe that
7 increasing brine flow by say five percent would result in
8 an increase in auxiliary loads that is probably somewhat
9 greater than five percent, but way less than 17 and a half
10 percent. And the overall result would be that auxiliary
11 power consumption would not be as great as the
12 increase -- the increase in auxiliary power consumption
13 would not be as great as the increase in gross power
14 generation. And so the net of power generation would
15 increase to above 50 megawatts.

16 MS. KLEBANER: Thank you, Mr. Koppe. No further
17 questions.

18 HEARING OFFICER CELLI: Now, you're finished with
19 your direct on all of your witnesses, is that correct?

20 MS. KLEBANER: That is correct.

21 HEARING OFFICER CELLI: Okay. I just want to
22 acknowledge that you have no other witnesses. We received
23 all of your evidence so far except for this last one
24 hanging out which is 52, Exhibit 52. We've -- are you
25 going -- are these witnesses going to testify anymore

1 about the -- you know, there was an allegation of an
2 intertwined, interconnectedness between East Brawley and
3 North Brawley, which it seems to me would not be
4 confidential. So I just want to know, after I finish off
5 this cross-examination, can I go back on as a public
6 hearing?

7 MS. KLEBANER: With respect to the allegation of
8 interconnectedness and the facts relevant to aggregation
9 factors used by the Commission, we believe our documents
10 speak for themselves. Our witnesses will not address that
11 issue.

12 HEARING OFFICER CELLI: Okay. All right. So
13 really this is going to -- when we finish this
14 cross-examination, then we are finished with CURE's case
15 in chief?

16 MS. KLEBANER: Yes.

17 HEARING OFFICER CELLI: Okay, very good.

18 Then respondent cross is first with you Ormat
19 Nevada, Inc.

20 MR. ELLISON: Thank you Hearing Officer Celli.
21 Is this on?

22 Here we go. First of all, let me say, that in
23 the interests of moving this hearing along, we have
24 refrained from making many possible objections that could
25 have been made to the testimony that's been received, and

1 I want to note that for the record.

2 For example, there were several references by the
3 witnesses to statements that Ormat supposedly made in the
4 technical conference that's clearly hearsay. I would
5 simply ask that the Committee recognize that all of that
6 is hearsay and ignore it rather than objecting every time
7 they said it.

8 MS. KLEBANER: May I respond to that?

9 HEARING OFFICER CELLI: Well, let me put it this
10 way. Since hearsay is admissible in our proceedings, a
11 hearsay objection is usually just sort of a waste of time,
12 unless it's really so completely unrelated that it's on
13 its face unuseful.

14 I acknowledge that and I just want the parties to
15 understand that what this Committee does is it looks at
16 all of the evidence, weighs the evidence, weighs the
17 trustworthiness of the evidence, including hearsay.
18 Obviously, hearsay isn't going to be as useful as in court
19 testimony or verified testimony, et cetera. So those are
20 all part of the weighing process. But I appreciate your
21 not wasting our time with hearsay objections.

22 MR. ELLISON: Thank you, Mr. Celli. Let me say
23 for this case and for future cases, that is the
24 Commission's usual practice in its proceedings. In fact,
25 I can cite you cases that say that this is an adjudicatory

1 proceeding, not a quasi-adjudicatory proceeding, and that
2 the rules of evidence are in effect, should be in effect.

3 We're not so concerned about that particular rule
4 with respect to hearsay. But we are concerned about it
5 with respect to due process, as I've discussed.

6 But in any event, we are -- one of our principal
7 interests here is to get this over with. So let me move
8 quickly.

9 CROSS-EXAMINATION

10 BY MR. ELLISON:

11 First of all, Mr. Marcus, with respect to Exhibit
12 52 your notes, when was this prepared?

13 MR. MARCUS: Part of it was prepared last Friday
14 and the bulk of it was prepared yesterday.

15 MR. ELLISON: Okay. Now I'm going to address in
16 the interests of time questions to both Mr. Koppe and Mr.
17 Marcus, so that we don't have to repeat them.

18 I believe both of you made references to the
19 design point for both North Brawley and East Brawley.
20 Isn't it correct that the design point you're referring to
21 is 49.5 megawatts

22 MR. MARCUS: Speaking for myself, document
23 number -- confidential document 21809 and confidential
24 document 21810 both are self-labeled on them as design
25 point and both show 49.5 megawatts.

1 MR. ELLISON: And Mr. Koppe?

2 MR. KOPPE: I think I referred to the both
3 documents as heat balances, because that certainly
4 describes what they are, and doesn't prejudge whether
5 they're the actual design or not. I'm not convinced they
6 are the actual design, but in any case, I was referring to
7 the numbers on the balances.

8 MR. ELLISON: Is it fair to say that both of you
9 have based your testimony on your review of documents
10 prepared by Ormat or statements made by Ormat in the
11 technical proceeding, as opposed to doing some sort of
12 independent engineering analysis of the facility or the
13 facilities I should say?

14 MR. MARCUS: It's certainly true that I've relied
15 upon documents prepared by Ormat and statements made by
16 Ormat. It's also true that I've done independent analysis
17 of those documents and not just taken them at face value,
18 particularly where documents contradict each other as I
19 explained in my testimony.

20 MR. ELLISON: Well, let me follow-up on that, Mr.
21 Marcus. I believe, if I understood your testimony
22 correctly, that what you did was to look at documents
23 prepared by Ormat and mix and match assumptions where you
24 believed that there were inconsistencies, but I don't
25 believe you developed any new numbers of your own, is that

1 correct?

2 MR. MARCUS: No, I don't think that's correct at
3 all. I have a whole series of numbers and the arithmetic
4 behind them is written down in Exhibit 52 as to what the
5 numbers in document 21810 would have been if they were
6 consistent with the numbers in 21809. And the numbers I
7 developed do not appear in either 21809 or 21810.

8 MR. ELLISON: Okay. Strike that.

9 Isn't it true that unlike, for example, nuclear
10 projects, other fossil projects, gas fired projects, that
11 geothermal projects similar to the ones as issue here
12 essentially produce their own fuel?

13 MS. KLEBANER: Could I ask counsel to direct the
14 witness -- to direct the question to a particular witness?

15 MR. ELLISON: It's directed to both of them.

16 MR. KOPPE: I didn't hear the last part of the
17 question, or at least I didn't understand it.

18 MR. ELLISON: The question is that unlike gas
19 fired projects, nuclear projects, isn't it true that these
20 geothermal projects essentially produce their own fuel by
21 pumping brine from a geothermal field?

22 MR. MARCUS: I don't think there's a distinction
23 that's usefully made there. Four Corners Four and Five,
24 for example, a very large coal plant that supplies about
25 1,500 megawatts to California and is fueled by a mine

1 mouth power plant. And it's producing its own fuel, in
2 your terminology, within a mile or two of the power plant.
3 And if you shut down the mine, you would shut down the
4 power plant.

5 But the rated capacity of the power plant is not
6 a function of how many steam shovels are working in the
7 mine, especially because it's open pit.

8 MR. ELLISON: Let me rephrase the question. In
9 this case, the power plant includes the brine pumps that
10 we're talking about, the various pumps for extracting and
11 returning brine from the geothermal field, correct?

12 MR. MARCUS: I'm not sure if you're using power
13 plant as some kind of term of art. The facility for which
14 I'm analyzing the maximum capacity includes the brine
15 pumps, because it's specified in the regulations and in
16 the staff's document that auxiliary loads for geothermal
17 plant include the loads for the geothermal field. Whether
18 that makes the field part of the power plant, I don't
19 think is addressed. It makes it part of the net capacity
20 calculation.

21 MR. ELLISON: Let me ask this question. Isn't it
22 true that both North Brawley and East Brawley are
23 dependent for their fuel on the particular geothermal
24 resource over which they're located?

25 MR. MARCUS: Well, I'm sorry to disappoint you,

1 but I think that's ambiguous too. I know that in the
2 documents I was reading some of those that were a
3 apparently drilled originally for East Brawley are now
4 intended to be used for North Brawley. And I heard my
5 counsel saying this morning that East Brawley has proposed
6 or has applied for permission to expand its well field
7 west of the new river whereas North Brawley has applied
8 for permission to expand its well field east of the north
9 river. So you'd have an overlap in the well field.

10 So I don't think you can say that they each have
11 a unique piece of geography on which they're dependent.

12 MR. ELLISON: That was not my question. My
13 question is are they dependent upon the known geothermal
14 resource over which they're located, that entire geothermal
15 resource? They can't import geothermal resource from
16 somewhere else. They can't run a gas brought in from
17 somewhere else. They're dependent upon what they can
18 pump from underneath the facility, correct?

19 MR. MARCUS: Well, no. If you're going to be
20 literal that's completely not true. They're pumping from
21 some distance away from the facility and then moving the
22 steam in pipes. So you'd have to define the geographical
23 area of the well field.

24 HEARING OFFICER CELLI: And I wonder if I may,
25 Mr. Ellison. Does this witness have the expertise to

1 answer the question you're asking, because I'm not sure
2 that that was established, specific to these --

3 MR. ELLISON: Well, he's testified as an expert
4 on plant capacity in the context of geothermal. And this
5 is actually a very simple question. Mr. Marcus has been,
6 I think, conspicuously evasive. The question that I'm
7 asking Mr. Marcus, and I'm also addressing it to Mr. Koppe
8 is isn't it true that the facilities in question here,
9 North Brawley and East Brawley, are dependent for their
10 fuel upon geothermal brine located underneath or near to
11 these facilities?

12 MS. KLEBANER: Objection. Relevance.

13 HEARING OFFICER CELLI: Overruled. Please answer
14 the question, if you can. First, Mr. Marcus.

15 MR. MARCUS: Depending on the definition of near,
16 the answer is yes. If by near you mean under, which is
17 the way you phrased it earlier, the answer is no. If by
18 near you mean within the range of the KGRA, then the
19 answer is yes.

20 MR. ELLISON: Okay. That's what I meant. Mr.
21 Koppe, do you agree with that?

22 MR. KOPPE: Yes.

23 MR. ELLISON: Okay

24 HEARING OFFICER CELLI: That was a yes for the
25 record.

1 Mr. Petty, are you able to hear the phone okay.

2 THE COURT REPORTER: Yes.

3 HEARING OFFICER CELLI: Okay. Thanks. Go ahead.

4 MR. ELLISON: Okay. Directing the witness's
5 attention to I believe it's either Exhibit 51 or 52, I
6 believe they're the same, this is the document that
7 describes by the staff how they go about calculating
8 capacity pursuant to section 2003.

9 And in particular, I would like to direct your
10 attention to page two of the August 9th, 2011 staff
11 document. Under step one, be number two, the rankine
12 cycle projects paragraph. Do you see that, Mr. Marcus and
13 Mr. Koppe?

14 MR. MARCUS: I have a copy and I do see it.

15 MR. KOPPE: I don't have it.

16 MR. ELLISON: Are you familiar with it, Mr.
17 Koppe? Do you know what I'm referring to?

18 MR. KOPPE: I'm aware of its existence. I have
19 either not looked at it or not looked at it in any detail.

20 MR. ELLISON: Okay. Well if you look at 2C, it
21 refers to assumption. One of the assumptions that you
22 make in doing this analysis for rankine cycle projects is
23 quote maximum fuel input conditions.

24 Mr. Marcus, do you see that?

25 MR. MARCUS: Yes, I do.

1 MR. ELLISON: And, Mr. Koppe, were you aware of
2 that?

3 MS. KLEBANER: I'm going to object to the
4 question as directed to Mr. Koppe. Mr. Koppe is limited
5 in his scope to Exhibits 203 and 204 per the direction of
6 this Committee.

7 HEARING OFFICER CELLI: Let me step back for a
8 moment.

9 MR. ELLISON: Mr. Koppe testified to increases in
10 brine flow above design assumptions. He seemingly
11 testified to essentially fuel input, which is what brine
12 flow, in this case, is.

13 HEARING OFFICER CELLI: Okay. But I want to step
14 back. Are we talking now about staff's testimony? What
15 exhibit are you referring to?

16 MR. ELLISON: This is the Exhibit 52 includes the
17 staff's standard assumptions for calculating capacity. It
18 is a letter to Charlene Wardlow dated August 15th, 2011.

19 MS. KLEBANER: I believe that's either Exhibit 52
20 or --

21 MR. ELLISON: I'm sorry, not 52. It's 50 or 51.
22 They're identical. I'm sorry I misspoke as to the number.

23 HEARING OFFICER CELLI: All right. That's why I
24 couldn't find out what you were talking about.

25 MR. ELLISON: Okay.

1 HEARING OFFICER CELLI: So we're talking about
2 Exhibit 50 or 51?

3 MR. ELLISON: That's right. Page two of the
4 staff attachment.

5 HEARING OFFICER CELLI: So staff's assessment,
6 are we talking about staff's assessment?

7 MR. ELLISON: We're talking about a description
8 of the Commission's process for determining capacity.

9 HEARING OFFICER CELLI: Okay.

10 MR. ELLISON: This is not the staff's assessment
11 with respect to these projects in particular. It's a
12 quote description of the evaluation process.

13 HEARING OFFICER CELLI: And that would be
14 exhibit -- this is Exhibit 50? This is 50?

15 Okay. All right. I know what you're talking
16 about now. Sorry for the interruption. I just had to be
17 clear.

18 MS. KLEBANER: I again would like to raise my
19 objection to the scope as directed to Mr. -- as the
20 question is directed to Mr. Koppe. Mr. Koppe does not
21 have this document before him. He has not reviewed it for
22 the preparation of this hearing.

23 HEARING OFFICER CELLI: Let's do this. I
24 would -- I'd like to ask whether Mr. Koppe does know what
25 this document is and if he has reviewed, and then we'll

1 rule on the objection.

2 So Mr. Koppe, did you see the two letters that
3 have been now marked as Exhibit 50 and 51, which were
4 letters from Terry O'Brien at the Energy Commission to
5 Charlene Wardlow?

6 MR. KOPPE: There are a few documents that I saw
7 that are not a part of the exhibits I was asked to review,
8 but I can't remember -- I don't remember much about them
9 and can't be sure whether I saw the documents you're
10 talking about or not.

11 HEARING OFFICER CELLI: Okay. So in that case,
12 he wouldn't have the foundation to respond to the
13 question. So I suppose you should ask Mr. Marcus.

14 MR. ELLISON: No. Let me ask a question of Mr.
15 Koppe. Mr. Koppe I believe that I understood your
16 testimony to include a calculation of generating capacity
17 for these projects, correct?

18 MR. KOPPE: I did say that the each of
19 these -- if these units had more brine available to them,
20 the existing or planned equipment could generate more than
21 50 megawatts net.

22 MR. ELLISON: Okay. Well, let me ask you this,
23 was it your intention in testifying to capacity to testify
24 to capacity in accordance with the way the Energy
25 Commission calculates capacity, including the staff's

1 generated assumptions for that calculation?

2 MS. KLEBANER: I object to Mr. Koppe's responding
3 to Exhibits 203 and 204, which include the factors
4 relevant to the analysis of what the net generating
5 capacity is as applied by the regulations, regulations
6 203.

7 HEARING OFFICER CELLI: I don't think that was
8 the question.

9 MR. ELLISON: Are you willing to stipulate that
10 Mr. Koppe then was not intending to testify to capacity as
11 calculated by the Energy Commission?

12 MR. KOPPE: No, I'm not prepared to stipulate to
13 that.

14 MR. ELLISON: All right. Then let me ask. Mr.
15 Koppe, did you review how the Energy Commission calculates
16 capacity in preparing your testimony?

17 MS. KLEBANER: Objection. Mr. Koppe reviewed the
18 numbers provided by the applicant in response to --

19 HEARING OFFICER CELLI: You know what, that's a
20 fair question. Objection is overruled. And I need to
21 hear the statement -- the witness can answer that
22 question. And perhaps Mr. Ellison if you need to ask it
23 again.

24 MR. ELLISON: The question was, did you review
25 the methodology by which the Energy Commission calculates

1 capacity in preparing your testimony?

2 MR. KOPPE: I did not. I -- what I did do is I
3 took the calculations that Ormat did, which I assumed met
4 the requirements of the Commission, and simply determined
5 that first, if you do nothing but increase the brine flow,
6 their availability of brine that you'd get more than 50
7 megawatts.

8 And second that even if you didn't -- and this is
9 true for both facilities, even if you didn't increase the
10 brine flow, simply using more realistic values of the
11 auxiliary loads would give you more than 50 megawatts. I
12 didn't look at how the Commission did it. I started with
13 how Ormat did it and acted for those two factors.

14 MR. ELLISON: So in having not reviewed how the
15 Commission calculates capacity, I take it you have no
16 opinion as to whether the -- what the capacity of these
17 projects is based upon the Energy Commission's method?

18 MR. KOPPE: Again, I assumed that Ormat did the
19 calculations in accordance with the Commission's approach.

20 HEARING OFFICER CELLI: So is that a no?

21 MR. ELLISON: That's not an answer to the
22 question. The question is, do you have an opinion --
23 since you haven't reviewed the Energy Commission's
24 methodology, is it fair so assume you have no opinion of
25 what the capacity of these projects is calculated

1 according to that method that you haven't reviewed?

2 MR. KOPPE: I think we know all the facts here.
3 I've said what my opinions are.

4 HEARING OFFICER CELLI: I think anything further
5 in this regard would become argumentative, but I think you
6 made your point, counselor.

7 MR. ELLISON: All right. Thank you.

8 Now, turning to Mr. Marcus. Mr. Marcus, you have
9 reviewed this document, have you not?

10 MR. MARCUS: Yes, I have.

11 MR. ELLISON: Okay. And you see under rankine
12 cycle projects that one of the assumptions is quote
13 maximum fuel input conditions, correct?

14 MR. MARCUS: Correct.

15 MR. ELLISON: Okay. And I believe that part of
16 your testimony was to say you testified -- and I'm going
17 to paraphrase here, but you testified something to the
18 effect that if the equipment installed on the surface was
19 capable of 90 megawatts, I think was the number that you
20 used, but the project owner only chose to deliver brine
21 that would allow 45 megawatts, that that would still be,
22 in your opinion, a 90 megawatt project?

23 MR. MARCUS: Yes, that's what I said. And you
24 can see a written version of that on the first full
25 paragraph -- or the second paragraph on the third page of

1 Exhibit 52.

2 MR. ELLISON: Okay. And are you relying upon
3 this phrase, "maximum fuel input conditions", when you say
4 that?

5 You're essentially saying that it would be --

6 MS. KLEBANER: Objection. Calls for a legal
7 conclusion.

8 HEARING OFFICER CELLI: No, overruled. Did you
9 rely on that phrase or not is the question?

10 MR. MARCUS: Yes, it's the last sentence of the
11 previous paragraph that says to quote myself, I took quote
12 maximum fuel input conditions unquote to mean maximum
13 geothermal brine flow conditions.

14 HEARING OFFICER CELLI: Okay.

15 MR. ELLISON: And when you say --

16 MR. MARCUS: This paragraph explains why, as we
17 just went through.

18 MR. ELLISON: Okay. Now, when you say maximum
19 geothermal brine input, did you mean the maximum that the
20 surface equipment could handle or did you mean the maximum
21 that the well field could supply?

22 MR. MARCUS: The former.

23 MR. ELLISON: If the --

24 MR. MARCUS: Because as they explain in the next
25 paragraph to do it any differently, means that the nature

1 of the surface equipment would become irrelevant. You
2 could have 90 megawatts worth of surface equipment and
3 say, "Well, it turns out operationally we don't find
4 enough brine. So even though we intended to build a 90
5 megawatt power plant, we've only got a 45 megawatt power
6 plant".

7 But when you're presumably -- you don't know in
8 advance at the time you would file an Energy Commission
9 application, you would -- you wouldn't build 90 -- or
10 design 90 unless you thought you were going to have 90.

11 MR. ELLISON: So you are assuming that the
12 capability of the well field is irrelevant to the capacity
13 of the plant?

14 MR. MARCUS: I'm assuming that the capability of
15 the -- that the maximum capacity of the plant as defined
16 consistent with the regulations is independent of what the
17 capability of the well field will later turn out to be.

18 MR. ELLISON: If it were demonstrated to you that
19 the well field later turned out to be incapable of
20 producing more than, let's say, 33 megawatts of power,
21 what would be the maximum amount of capacity that the
22 plant could produce?

23 MR. MARCUS: That would depend on two things. It
24 would depend on the exact kind of analysis that you did in
25 exhibits -- I'm sorry, in documents 20809 and 20810 and

1 21829 asking what is the hardware on the surface, as you
2 call it, designed to produce? It would also depend on the
3 definition of well field, because in the example you gave
4 of a well field that's only capable of 33, you have to say
5 well, well field as measured by what?

6 And, for example, in the case of North Brawley
7 and East Brawley where you've got well fields that extend
8 apparently past each other, the question is if you're
9 taking brine from one set of wells and delivering it to a
10 power plant producing 33, and you're taking brine from
11 another set of wells and delivering it to a different set
12 of surface hardware and producing another 33, but you
13 could have delivered it all to the first power plant and
14 generated 52, has the well field actually constrained you
15 to 33?

16 And so that becomes a fact question even in your
17 hypothetical about a well field constraining you as to
18 what the definition of well field is and what geographical
19 area you're defining the well field and what time frame
20 you're defining the well field. Does it mean in the first
21 year of operation, the last year of operation, the best
22 year of operation?

23 I take the definition of maximum fuel input
24 conditions, those words in the staff's criteria, to mean
25 the amount that is producible based on a maximum brine

1 flow condition.

2 MR. ELLISON: When you say maximum brine flow
3 condition, you mean the maximum that the surface equipment
4 can accept?

5 MR. MARCUS: That's correct.

6 MR. ELLISON: Okay. And it's your
7 interpretation of this phrase maximum fuel input
8 conditions that excludes the maximum that the well field
9 can produce?

10 MR. MARCUS: It is an interpretation made by me.
11 If you mean by the phrase, "your interpretation", to imply
12 that nobody else in the world holds it, I don't know if
13 that's true or not.

14 MR. ELLISON: No. What I meant was can you point
15 me to any authority for that interpretation, other than
16 what we have in front of us here?

17 MR. MARCUS: All I can point you to is the words,
18 "maximum fuel input", which usually means unconstrained.
19 Maximum doesn't mean some number less than the maximum.
20 And to the logic behind the appropriateness of that that's
21 in my testimony, that if you assumed some other
22 definition, then the size of the hardware would become
23 irrelevant and that doesn't seem like that's the point of
24 the regulations.

25 MR. ELLISON: Okay. Mr. Marcus, are you -- in

1 preparing your testimony, did you review the actual
2 capacity history of North Brawley, which is an operating
3 project?

4 MS. KLEBANER: Objection. Relevance.

5 HEARING OFFICER CELLI: Overruled.

6 MR. MARCUS: I reviewed confidential document
7 21825 which shows operating heat input and megawatts out
8 for the period January 1st through I believe it was about
9 September 5th of 2011. I did not review any data from
10 prior to January 1st or later than early September. And I
11 did that to look at whether the plant was, in fact,
12 producing more megawatts proportional to heat input than
13 it was designed for, and the answer was yes it was for
14 most of that.

15 MR. ELLISON: What is your understanding of the
16 maximum net capacity that North Brawley has delivered to
17 the grid, at any time, in its operation?

18 MR. MARCUS: I don't know, because I don't know
19 when it began operating.

20 In 2011, the highest output delivered to the grid
21 was either early in January at the very beginning of the
22 data or sometime around April 1st about three months into
23 the data. And it was somewhere around 34 megawatts.

24 MR. ELLISON: Are you aware that a capacity test
25 was done pursuant to the power sales agreement for North

1 Brawley?

2 MR. MARCUS: I'm aware that Exhibit 2 represents
3 that such a test was done and resulted in a revised rated
4 capacity for PPA purposes. I don't know of my own
5 personal knowledge whether one was done.

6 MR. ELLISON: And do you know what that revised
7 capacity number for the contract is?

8 MR. MARCUS: I don't recall the exact number. It
9 went to three decimal places, but it was 30 something
10 megawatts.

11 MR. ELLISON: Would you accept, for the sake of
12 subject to check, 33 megawatts?

13 MR. MARCUS: Yes.

14 MR. ELLISON: Now, I believe in your testimony
15 you stated that you looked for the limiting piece of
16 equipment, in terms of surface equipment, and concluded
17 that that was -- that the -- that that was the brine
18 pumps?

19 MR. MARCUS: For North Brawley, it was the brine
20 pumps. For East Brawley it was the circulating water
21 pumps.

22 MR. ELLISON: I'm sorry. I was referring to
23 North Brawley.

24 And you assumed a -- not only a -- and you
25 assumed a brine flow that was above the design point

1 design flow used by Ormat, correct?

2 MR. MARCUS: Well, that's where it gets
3 complicated. I calculated -- I didn't assume anything. I
4 calculated from the specifications that were given to me
5 for the brine booster pumps, which were more restrictive
6 than the brine pumps themselves, that 13 booster pumps
7 would be -- were designed to produce 2,000 gallons per
8 minute each, or to move 2,000 gallons per minute each and
9 that that, when converted to pounds per hour, was three
10 percent more than the number of pounds per hour that would
11 produce 49.5 megawatts.

12 So the word design appears both. There's a
13 design point for the pumps. The pumps, as Mr. Koppe
14 testified, may well be capable of producing more than
15 their design amount, but I assumed the pumps and the pump
16 motors would operate at their designs as shown on the pump
17 specific document for North Brawley.

18 MR. ELLISON: Okay. With respect to both North
19 and East Brawley and the pumps which you assumed in each
20 case for the limiting piece of equipment, you assumed an
21 increase in operation above the design point, correct?

22 MR. MARCUS: Actually, I did it both ways as I
23 made clear in my testimony. I did it with the case of six
24 OECs, which would involve flows above what is labeled as
25 design point in confidential documents 21809 and 21810. I

1 did it by looking at constraints of individual components.
2 That resulted in brine flows that would be above what's
3 called design point in exhibits -- in documents 21809 and
4 21810. But I also did it the third way for each of them,
5 which is by assuming that the brine flows were exactly the
6 levels that Ormat said would produce 49.5 megawatts for
7 both and then looked at the auxiliary loads and found in
8 each case, that the plant would be capable of producing
9 slightly more than 50 megawatts, even at what is called
10 the design point on documents 21809 and 21810.

11 MR. ELLISON: With respect to any portion of your
12 analysis that assumed an -- let me put it this way. Some
13 of your analysis assumes increase in auxiliary loads for
14 pumps, correct?

15 MR. MARCUS: That's correct.

16 MR. ELLISON: Okay. Did you look at the
17 capability of the wiring and cabling in the plant to
18 supply the increase in auxiliary loads that you assumed?

19 MR. MARCUS: No, I did not. As I said in my
20 testimony, it is possible to have minor components of the
21 plant that would act as a constraint. But my assumption,
22 consistent with good engineering practices, if you're
23 going to spend money on the big expensive stuff to operate
24 at a certain -- to be capable of operating at a certain
25 level, it would be absolutely penny wise and pound foolish

1 to then design the cheap stuff to not be able to use the
2 capability of the expensive stuff.

3 MR. ELLISON: Would it be penny wise and pound
4 foolish if were you designing to 49.5 and no greater?

5 MR. MARCUS: I think it would be actually. The
6 idea that you can design to an exact number and no exactly
7 what you're going to get would be very unlikely. Part of
8 the surprise here in the first place is that you have two
9 different amounts of input for fuel for two different
10 plants and yet you get the exact same output down to the
11 one part in 5,000.

12 Any engineer I would expect would design some
13 tolerance for things not behaving exact three way you plan
14 for them to behave. And that's why it's not surprising to
15 find that the capability of individual components is
16 bigger than the exact amount that produces 49.50
17 megawatts. And that the amount by which individual
18 capabilities are above that is different for individual
19 pieces of equipment.

20 MR. ELLISON: So is it fair to say that you have
21 assumed that these so-called small components would permit
22 the greater amount of operation you've assumed, but you
23 haven't reviewed the documents or reviewed the plant
24 itself to determine that?

25 MR. MARCUS: I have absolutely reviewed the

1 documents. I reviewed every document that I was provided
2 and I then -- where there was certain specific
3 documents --

4 MR. ELLISON: I'm sorry to interrupt --

5 MR. MARCUS: -- 21819 and 21 --

6 MR. ELLISON: -- but my question was not whether
7 you had reviewed documents. My question was, which
8 frankly -- let me rephrase it.

9 HEARING OFFICER CELLI: Actually, that was part
10 of the question.

11 MR. ELLISON: Do you know -- what?

12 HEARING OFFICER CELLI: That was part of the
13 question whether he reviewed documents.

14 MR. ELLISON: Well, it was part leading up to
15 determine some specific thing. I didn't ask whether he'd
16 reviewed the documents period.

17 Do you know whether including the so-called small
18 components, that North Brawley can generate more than 49.5
19 megawatts?

20 MR. MARCUS: The small components that I was able
21 to -- or that I tried to pursue data for were the makeup
22 water pump and blow-down pump, which are a few hundred
23 kilowatts each and the individual pumps within the OECs
24 which are a few hundred kilowatts each, and then the
25 vaporize -- the Level 1 and Level 2 vaporizers within the

1 OEC. I did not look for data for smaller components than
2 that to see if any of them were capable of 49.5, but not
3 more than whatever would be required to support 50.

4 MR. ELLISON: So example, if the cabling and
5 wiring to the pumps was designed to deliver the assumed
6 design point auxiliary load, and no more than that, the
7 plant as a whole could not generate anything more than the
8 design point of 49.5, correct?

9 MR. MARCUS: No. What it's designed for and what
10 it's capable of safe operation at are or at least really
11 should be different. Design for in the sense of what we
12 expect to happen and design for in the sense of what the
13 machinery is capable or the cabling is capable of handling
14 are not the same thing.

15 MR. ELLISON: Can you testify that either North
16 Brawley -- let's take North Brawley separately.

17 Can you testify that North Brawley considering
18 all of its facilities and components, all of the
19 facilities that are out there now, can generate more than
20 49.5 megawatts?

21 MR. MARCUS: With the --

22 MR. ELLISON: Do you know that it can?

23 MR. MARCUS: With the wells to which it is
24 connected today, are you asking me?

25 MR. ELLISON: With the wells that it's connected

1 to today and with the -- with a -- well, let's just take
2 that. With the wells that it's connected to today?

3 MR. MARCUS: I believe with the wells it is
4 connected to today it cannot generate more than 49.5
5 megawatts net.

6 MR. ELLISON: Okay. And if you were to increase
7 the brine flow, so that that was not a limiting condition,
8 do you know that all of the surface facilities, pumps,
9 wiring, cabling, OECs everything, the plant as a whole,
10 can you testify under oath that that project can produce
11 more than 49.5 megawatts?

12 MR. MARCUS: No.

13 MR. ELLISON: And lastly, with respect -- this
14 question is directed to both Mr. Koppe and Mr. Marcus.

15 MR. MARCUS: Let me clarify, with respect to all
16 the equipment that has been shown as evidence that it can
17 produce 49.5 megawatts, then I believe, and I will testify
18 and have testified here today, it could produce more than
19 49.5 and, in fact, more than 50. Whether there is
20 something that is not shown in the documents that justify
21 49.5, but that if examined would justify 49.5, but would
22 not justify 50.1, I don't know.

23 MR. ELLISON: Finally, with respect -- this is to
24 both Mr. Koppe and Mr. Marcus, have either of you looked
25 at the consistency of operating above 50 megawatts

1 with -- and this is for both -- well for North Brawley,
2 with its permit conditions, both at CUP, it's air permit,
3 or its interconnection agreement?

4 MR. MARCUS: While it wasn't the purpose of my
5 analysis, I have seen, in the course of doing my analysis,
6 documents that indicate that operating consistently above
7 49.9 megawatts at North Brawley would require some kind of
8 permit revision and that operating above some number in
9 the thirties -- I think we said 33 subject to
10 check -- would require some kind of contract amendment
11 with Southern California Edison.

12 I don't believe either of those possible
13 constraints on operation, has anything to do with the
14 plant capacity, which is a hardware issue, otherwise you
15 could build any size power plant, sign a 49 megawatt
16 contract, and then say, well, this plant is exempt from
17 regulation.

18 Also, I'm aware from my other work repeated
19 instances over the year in which power plant PPAs, such as
20 the one between Ormat and Edison, have been amended to
21 change the capacity, often to increase the capacity, so
22 that I don't believe that if the hardware will support
23 more than 50 megawatts, the fact that the current PPA has
24 a number less than 50 megawatts decides what the maximum
25 capacity of the plant is.

1 MR. ELLISON: So is it your testimony that the
2 Power Purchase Agreement is irrelevant to determining
3 capacity in accordance with the Commission's method?

4 MR. MARCUS: I believe it is irrelevant,
5 according to the Commission's method, which says nothing
6 about contract limits. It actually -- I don't remember if
7 it's the regulations or the staff does have some language,
8 which I'm looking for and not seeing, that says that
9 equipment that has been turned down at the owner's
10 discretion to less than its physically capable of, that
11 that's not an appropriate way of evaluating capacity.

12 MR. ELLISON: Okay. Now, you've been focused on
13 the PPA, but earlier in your answer, I believe you
14 acknowledged that the conditional use permit for North
15 Brawley is limited to 49.9 megawatts, correct?

16 MR. MARCUS: No, those not quite what I said.

17 MR. ELLISON: What did you say?

18 MS. KLEBANER: Can you repeat the question
19 please, the full question?

20 MR. ELLISON: The question was what did you say?

21 MR. MARCUS: I said that my recollection, based
22 on seeing the document in passing, since it wasn't what I
23 was focusing on, was that there was a condition requiring
24 Ormat to go back to the county for an amendment to the CUP
25 if they wanted to increase the output above 49.9

1 megawatts.

2 MR. ELLISON: So as the permit stands now,
3 assuming that you're recollection is correct, and without
4 an amendment, operating the facility as you describe over
5 507 megawatts would violate the county's permit, would it
6 not?

7 MR. MARCUS: I don't really know. I'm going to
8 have to invoke the I'm not a lawyer defense here.

9 MR. ELLISON: Okay. All right. That's all I
10 have. Thank you very much.

11 HEARING OFFICER CELLI: For both witnesses Mr.
12 Ellison?

13 MR. ELLISON: Yes, for both witnesses.

14 HEARING OFFICER CELLI: Okay. Thank you. Cross
15 is now with staff.

16 CROSS-EXAMINATION

17 BY STAFF COUNSEL OGATA:

18 Thank you, Mr. Celli.

19 Good afternoon, Mr. Marcus and Mr. Koppe.

20 MR. MARCUS: Good afternoon.

21 STAFF COUNSEL OGATA: My name is Jeff Ogata. I
22 am counsel for the CEC staff. Mr. Koppe I just have one
23 question for you. I believe your testimony was that when
24 you were talking about the design of the different
25 auxiliary pieces of equipment that you weren't surprised

1 that the actual ability of some of this equipment was
2 higher than design, is that correct?

3 MS. KLEBANER: Can you repeat the question.

4 STAFF COUNSEL OGATA: I believe your testimony
5 was that when you were discussing the capability of the
6 auxiliary equipment that you were not surprised if the
7 auxiliary equipment was able to perform at levels higher
8 than designed, is that correct?

9 Mr. Koppe?

10 MS. KLEBANER: Mr. Koppe, are you there?

11 HEARING OFFICER CELLI: Mr. Koppe, can you hear?

12 MR. KOPPE: I heard what you just said. I'm not
13 hearing everything.

14 HEARING OFFICER CELLI: Mr. Ogata if you can say
15 it again and speak directly. I know, he's hitting his
16 nose against the microphone, but let's see if you can get
17 it again.

18 (Laughter.)

19 STAFF COUNSEL OGATA: Okay. Mr. Koppe can you
20 hear me better now?

21 MR. KOPPE: Yes.

22 STAFF COUNSEL OGATA: I feel like I'm screaming
23 in side the room. My question was I believe your
24 testimony was when you were describing the capability of
25 the auxiliary equipment to perform at higher levels than

1 what was designed, that you didn't think that that was
2 unusual, is that correct?

3 MR. KOPPE: I don't remember if I said that, but
4 in any case I do believe it. Pumps generally can pump
5 more than what their designed for and it's pretty common
6 to specify motors that are a little bit bigger than what
7 the pump needs.

8 STAFF COUNSEL OGATA: Thank you.

9 Mr. Marcus, also on page five of Exhibit 52 in
10 paragraph 16B, you also state that the specific
11 fan -- pumps, fans, other project components planned by
12 Ormat had a margin built into them and that they were
13 capable of handling operations at somewhat higher levels
14 than the design point.

15 Also, in your experience is that unusual?

16 MR. MARCUS: No.

17 STAFF COUNSEL OGATA: So with respect to your
18 analysis Mr. Marcus of components being able to run at
19 perhaps something like seven percent higher in some cases,
20 when you look at that, are you considering that equipment
21 to run continuously at that level or are you just saying
22 that on sort of a one-time basis equipment could run at
23 that level?

24 MR. MARCUS: No. The definition is either
25 continuously for equipment that runs all the time or

1 average for equipment runs intermittently. I was looking
2 at equipment running at the equipment's design level and
3 finding whether that was higher than the assumed equipment
4 use level in the plant mass balance. But I was -- I never
5 assumed that any equipment would run above its own design
6 level.

7 STAFF COUNSEL OGATA: So in the analysis that you
8 provided to us, did you consider then that whether or not
9 the equipment was running continuously at that higher
10 level or not?

11 MR. MARCUS: I assume -- well, for example,
12 to -- looking at the same page at the brine production
13 pumps, for North Brawley document 21810 shows 11.346
14 million pounds per hour, which you apportion it across 13
15 pumps and convert to gallons per minute, would be about
16 1,940 gallons per minute.

17 The design rate for the brine production pumps
18 shown in Exhibit 21838 -- sorry document 21838 is 2,060
19 gallons per minute. The design rate for the brine booster
20 pumps shown in document 21831 is 2,000 gallons per minute.
21 Both of those numbers are bigger than 1,940. My
22 assumption was if it's capable of operating at 1,940
23 gallons per minute on a continuous basis which is what
24 Ormat assumed, and if the design number that's in the
25 design documents that I cite here is 2,000 or in the case

1 of production pumps 2,060, then it's also capable of
2 operating at 2,000 on a continuous basis.

3 MR. KOPPE: If I could just add to what I said
4 earlier. What Dave said is clearly enough, but
5 maybe -- because what we have here is that first the pumps
6 and their motors were designed to produce more flow than
7 what is needed at the balanced conditions at the 49.5.
8 And, of course, they'll run continuously at those design
9 conditions. They're designed to run continuously at the
10 design conditions.

11 And then what I said was it is not uncommon
12 for -- it is in fact common for pumps and motors to be
13 able to run at even higher flows. So in fact, the unit
14 could -- the systems could run continuously at flows that
15 are somewhat higher than design. But even without that
16 just running at their design conditions, they're already
17 able to produce more power than 49.5 megawatts.

18 STAFF COUNSEL OGATA: Okay. Thank you.

19 Mr. Marcus, again with respect to your testimony,
20 when you're talking about components running at some
21 percentage higher than, you know, they're designed for,
22 indicated that components could also turn down certain
23 percentage as well, not just increase. They could also
24 turn down. Is your assumption, when you made those
25 calculations, that all the equipment would turn down that

1 same percentage?

2 MR. MARCUS: No.

3 STAFF COUNSEL OGATA: Can you explain what you
4 assumed then with respect to your calculations?

5 MR. MARCUS: Most of this equipment is actually
6 multiple instances. There are -- in the documents
7 describing North Brawley for example, there are 13 brine
8 pumps. There are 13 brine production pumps. There are
9 either five or ten OEC pumps at each level. There are
10 quite a few fans. There are two cooling towers each with
11 multiple fans. I think there are a total of 15 cells, but
12 I don't recall offhand.

13 MR. KOPPE: Yes.

14 MR. MARCUS: And so there are -- the actual
15 mechanics of how if the required flow for North
16 Brawley -- sorry for East Brawley is eight to eight and a
17 half percent less than for North Brawley, the way you
18 would maintain that flow could be by turning a pump down,
19 or it could be by turning one of many pumps off. You
20 could achieve an eight percent reduction in flow by
21 running 12 out of 13 pumps or by running 14 out of 15
22 fans. So I don't get into the details of how you would do
23 it.

24 STAFF COUNSEL OGATA: So when you made your
25 calculations, you didn't just assume that all the

1 equipment would be turned down at some percentage or -- is
2 that right?

3 MR. MARCUS: It varies by case, what I was doing.
4 I mean I describe each of the different analyses I did.

5 STAFF COUNSEL OGATA: So as an example, if were
6 you going to -- if you didn't need all the brine pumps,
7 would you necessarily have to turn the fans down as well
8 or could you just leave the fans running at full -- at
9 that point?

10 MR. MARCUS: The assumption that I made there,
11 which was based on Ormat's -- on a comparison of Ormat's
12 data for North and East Brawley, was that it wouldn't be
13 proportional, that for every megawatt increase in gross
14 output, you would lose back almost half of that gain
15 through an increase in auxiliary load. And so the
16 percentage increase in auxiliary load would be bigger than
17 the percentage increase in gross load.

18 And what that means in terms of your question is
19 if you're running East Brawley with eight and a half
20 percent less brine than North Brawley, you wouldn't be
21 able to reduce its auxiliary loads by eight and a half
22 percent. You might only be -- relative to North Brawley,
23 you might only be able to reduce them by five percent or
24 six percent.

25 So you wouldn't get the full benefit of the lower

1 brine flow. And the particular numbers where I quantify
2 that, the proportion was a little bit over half. The gain
3 in net, in percentage terms, is a little bit more than
4 half of the gain in gross.

5 STAFF COUNSEL OGATA: Okay. Those are all the
6 questions I have. Thank you.

7 HEARING OFFICER CELLI: Thank you, Mr. Ogata.
8 Mr. Wilkins?

9 MR. WILKINS: The county doesn't have any
10 questions.

11 HEARING OFFICER CELLI: Thank you. We would be
12 finished with these witnesses as long as -- unless, there
13 is no further questions from the -- one moment. We're
14 going to go off the record for a second.

15 (Thereupon a discussion occurred off the record.)

16 HEARING OFFICER CELLI: And for the record, I
17 just asked whether complainant had any redirect, which
18 they indicated they did, but before they do, the Committee
19 wants to know -- ask both Mr. Koppe or Mr. Marcus whatever
20 would know the answer to this question or either of you,
21 whether there's any equipment or component that would lock
22 or limit the megawatts of either North Brawley or East
23 Brawley to below 50 megawatts?

24 MR. MARCUS: Not that I'm aware of.

25 MR. KOPPE: Not that I'm aware of.

1 HEARING OFFICER CELLI: Okay. Thank you. So go
2 ahead with redirect.

3 MS. KLEBANER: Thank you.

4 MR. KOPPE: And in fact, let me just say, that
5 North Brawley, for example, will produce more than 50
6 megawatts at the equipment conditions shown in the heat
7 balance, because the auxiliary loads are overstated. Some
8 of the auxiliary loads are based on the name plate of the
9 pump motors. And the pumps don't require that much
10 auxiliary load.

11 So you don't have to operate any of the equipment
12 at North Brawley at above the conditions shown in that
13 heat balance, you get more than 50 megawatts.

14 HEARING OFFICER CELLI: Redirect.

15 MS. KLEBANER: Yes. Thank you.

16 REDIRECT EXAMINATION

17 BY MS. KLEBANER:

18 For Mr. Marcus, you were asked about the stated
19 current capacity in the Power Purchase Agreement?

20 MR. MARCUS: Yes, I recall that.

21 MS. KLEBANER: Do you know what the original
22 purchase capacity identified in the agreement is?

23 MR. MARCUS: It was 50 megawatts with an option
24 to go up to 100 and seller's option.

25 MS. KLEBANER: Is that sort of information

1 relevant to a plant's net generating capacity?

2 MR. MARCUS: It's certainly relevant in showing
3 what they thought the power plant was going to be capable
4 of.

5 MS. KLEBANER: Thank you. Is there anything you
6 wish to clarify at this time?

7 MR. MARCUS: No.

8 MS. KLEBANER: Thank you.

9 Mr. Koppe I'll have a few questions for you as
10 well.

11 MR. KOPPE: Okay.

12 MS. KLEBANER: Did you review the heat and mass
13 balance calculations provided by the respondent?

14 MR. KOPPE: Yes.

15 MS. KLEBANER: Did you reviewed the assumptions
16 underlying those calculations that were provided by the
17 respondent?

18 MR. KOPPE: I reviewed the information that was
19 provided, so there are some assumptions that are given in
20 the calculations and then there is some added information
21 in the design data sheets for some of the pumps and other
22 equipment.

23 MS. KLEBANER: So just to be clear, you reviewed
24 the information that was provided by the respondent if
25 Exhibits 203 and 204?

1 MR. KOPPE: Yes.

2 MS. KLEBANER: Did you perform an independent
3 evaluation of that data?

4 MR. KOPPE: To the extent I could with the
5 information available, yes.

6 MS. KLEBANER: Did you consider the gross
7 generated capacity of the East Brawley and the North
8 Brawley plants?

9 MR. KOPPE: If we assume that the -- that North
10 Brawley can get more brine than what is shown in the heat
11 balance for North Brawley, then it can generate -- it
12 would have to be several megawatts over 70 megawatts
13 gross.

14 MS. KLEBANER: Is the -- so I'm going to ask
15 again, did you consider the gross generated capacity of
16 the plants --

17 MR. KOPPE: Yes.

18 MS. KLEBANER: -- as -- thank you.

19 Did you consider the auxiliary load as provided
20 by the respondent for both plants?

21 MR. KOPPE: Yes.

22 MS. KLEBANER: How many OEC converters were
23 identified in the documents you reviewed with respect to
24 the east -- with respect to the East Brawley and North
25 Brawley plants?

1 MR. KOPPE: Five.

2 MS. KLEBANER: Thank you. What did you use to
3 determine the gross maximum generating capacity for the
4 East Brawley and North Brawley plants?

5 MR. KOPPE: I considered --

6 MS. KLEBANER: Did --

7 MR. KOPPE: I considered -- I started with
8 Ormat's calculation that East Brawley would produce 69.75,
9 I believe it was, megawatts gross at the design flows.

10 MS. KLEBANER: How did you arrive -- how is that
11 number calculated, the 69.?

12 MR. KOPPE: I mean Ormat calculated it. I know
13 the general process, but some of the -- a lot of the
14 details --

15 MS. KLEBANER: If you know the number of OECs --

16 MR. KOPPE: Five.

17 MS. KLEBANER: -- how would you determine the
18 gross maximum generating capacity of a plant? What
19 calculation would you perform?

20 MR. KOPPE: If I just wanted to -- if we're not
21 talking about brine limit, I would expect that the gross
22 capacity would be 1,600 -- would be 16 megawatts times
23 five OECs equals 80.

24 MS. KLEBANER: Thank you.

25 What factors did you use to determine the net

1 generating capacity as --

2 HEARING OFFICER CELLI: I wonder, Ms. -- I'm
3 sorry Ms. Klebaner, did you not cover this already on
4 direct because I kind of believe that he did testify to
5 this. Maybe I'm confusing the two witnesses, but I
6 thought he had -- I just want to make sure we're not
7 covering ground we've already covered.

8 MS. KLEBANER: I don't think we are. I don't
9 think on direct Mr. Koppe went into detail with respect to
10 what factors he used to determine -- to testify regarding
11 the net generating capacity of the East Brawley and North
12 Brawley plants.

13 MR. ELLISON: Well, I would object on --

14 HEARING OFFICER CELLI: And was that raised on
15 net -- on cross-examination is what I'm trying the figure
16 out? How did it get reopened on cross?

17 MS. KLEBANER: On cross-examination, Mr. Koppe
18 was asked regarding whether he reviewed the regulations
19 specifying how net generating capacity is calculated for
20 the purpose of the California Energy Commission. I'm
21 asking him what factors he used to calculate the net
22 generating capacity for the two projects.

23 HEARING OFFICER CELLI: Okay.

24 MS. KLEBANER: Thank you.

25 HEARING OFFICER CELLI: Let's try to keep it to

1 the cross if we can. We'll limit the scope. Go ahead you
2 can answer that question, Mr. Koppe.

3 MS. KLEBANER: Let me repeat --

4 MR. KOPPE: I started -- well, to
5 calculate -- I'm sorry, the question was how did I queue
6 late the auxiliary loads?

7 MS. KLEBANER: That's correct.

8 MR. KOPPE: I started with Ormat's numbers, and
9 then I -- for various pumps and other equipment I looked
10 at the design data for those components and determined
11 from the design data or estimated from the design data how
12 much electric hour would be required to run those
13 components at the flows shown in the heat balance.

14 MS. KLEBANER: And my last question is, if you
15 knew the generating capacity of a plant and you knew its
16 auxiliary load, how would you determine the net generating
17 capacity of a power plant?

18 MR. KOPPE: You take the gross generation and you
19 subtract out the auxiliary loads, and you have the net
20 generation.

21 MS. KLEBANER: Thank you. No further questions.

22 HEARING OFFICER CELLI: Cross limited to the
23 redirect?

24 MR. ELLISON: None.

25 HEARING OFFICER CELLI: Thank you. Staff?

1 STAFF COUNSEL OGATA: Nothing further. Thank
2 you.

3 HEARING OFFICER CELLI: Thank you. City of
4 inn -- I'm sorry County of Imperial?

5 MR. WILKINS: Nothing for the county.

6 HEARING OFFICER CELLI: Thank you.

7 Then these witnesses are excused?

8 Wow, wow, timeout. Don't be excused. Wait Mr.
9 Koppe. Stay here.

10 (Laughter.)

11 MR. KOPPE: I'm still here.

12 HEARING OFFICER CELLI: We're just going to go
13 off the record for one moment while the witnesses stay
14 here.

15 (Thereupon a discussion occurred off the record.)

16 HEARING OFFICER CELLI: I am -- for the record, I
17 am unmuting the podium, which --

18 MR. ELLISON: Actually, Mr. Celli, before we
19 conclude the in-camera hearing, based upon CURE's
20 testimony, I'm going to make a motion to dismiss for
21 failure to carry their burden of proof. And the question
22 is do you want that done in public or do you want it done
23 in the in-camera hearing. And I will tell you that my
24 motion is not going to reveal any confidential
25 information.

1 HEARING OFFICER CELLI: Then I think we can do it
2 publicly. So we will unmute the podium.

3 (Thereupon the Ormat Nevada, Inc. in-camera
4 hearing adjourned and a recess was taken.)

5 (Thereupon the Ormat Nevada, Inc. hearing
6 reopened in open session.)

7 HEARING OFFICER CELLI: Okay. Now, ladies and
8 gentlemen, we're back on the air as it relates to WebEx.
9 I'm going to have to make a change to the document that
10 says that we're having an in camera proceeding. But I
11 wanted to do, Ms. Jennings, is have these witnesses inform
12 the witnesses that were -- Imperial County's witnesses as
13 to their testimony with regard to the county's document.

14 And so what -- who I have on right now is I have
15 one person calling in number 12. Let me unmute everybody.
16 I hope this isn't a mistake.

17 There we go.

18 I have -- let's see I have Robert Sarvey on. I
19 have Rosario Gonzalez. I want to unmute here. Rosario
20 can you hear me?

21 MS. GONZALEZ: Yes. I can. Thank you.

22 HEARING OFFICER CELLI: Okay. And Robert Sarvey,
23 I guess you're on headphones, so you're not on a phone.

24 I have let's see Jim Minnick and Dan Campbell who
25 aren't listening in at all, they're just looking at their

1 computers. And a person -- call-in user number 12, could
2 you identify yourself please?

3 If you're on the phone and I haven't called your
4 name, would you please speak up?

5 Okay. I have an anonymous call-in person right
6 now. That is the sum total of the people on the phone.

7 PUBLIC ADVISER JENNINGS: Hearing Officer Celli,
8 can you give me five minutes or so to call the people that
9 are not still on.

10 HEARING OFFICER CELLI: There you go. That's a
11 great idea.

12 PUBLIC ADVISER JENNINGS: Okay.

13 HEARING OFFICER CELLI: We also want the county
14 to call his witnesses to let them get back on WebEx and
15 anybody else who wants to call someone and let them get on
16 WebEx. I think we will take -- okay. We're going to
17 order that the witnesses remain. That's Mr. Koppe and Mr.
18 Marcus. We're going the go off the record for 10 minutes
19 and we'll be back on the record in 10 minutes and
20 hopefully everyone will have called in back on WebEx.

21 And, Ms. Jennings, if I can ask you to please
22 take that in camera note off the door.

23 PUBLIC ADVISER JENNINGS: Yes.

24 HEARING OFFICER CELLI: Okay. There's also -- if
25 we have an internal feed that we need to turn back on, and

1 I need to change the WebEx word. So we are -- we're back
2 on the public part. We're going to take a break until
3 3:10, so go ahead.

4 (Off the record at 3:00 p.m.)

5 (On the record at 3:12 p.m.)

6 HEARING OFFICER CELLI: We're back on the record.
7 I have all of my parties back. And this is now public
8 again, we're out of the in camera hearing. I see that we
9 have a number of people who have called in, which is good.
10 You're muted but we will give you an opportunity later to
11 make public comment if you desire.

12 We did need the witnesses, Mr. Marcus and Mr.
13 Koppe, to state for the record a summary of their
14 testimony as it related to the County of Imperial's
15 documents for the benefit of the people from the County of
16 Imperial. And I'm not sure we have them all on the phone
17 right now. I have, it looks like I have Rosario Gonzalez,
18 Robert Sarvey, Mavis Scanlon, Jim Minnick, Don Campbell,
19 only.

20 MR. WILKINS: I understand that Richard Cabanilla
21 is with Jim Minnick in his office and those are the two
22 County witnesses.

23 HEARING OFFICER CELLI: Okay. Let me just
24 confirm. Jim Minnick, are you there, can you hear me?

25 MR. MINNICK: Yes I can.

1 HEARING OFFICER CELLI: Okay. And you're with,
2 Mr. Campanella (sic), was it?

3 MR. MINNICK: He's right outside the office, I'll
4 bring him in.

5 HEARING OFFICER CELLI: Okay. You know,
6 actually, Mr. Minnick, if you're at your offices it would
7 be preferable if Mr. Campanella had his own phone
8 connection to WebEx instead of the two of you sharing a
9 phone. We would prefer that he were in a separate
10 location calling in.

11 MR. MINNICK: Okay, we can do that.

12 HEARING OFFICER CELLI: That would be best.

13 MR. MINNICK: I thought we were going to do more
14 of a panel thing but that's fine.

15 HEARING OFFICER CELLI: We are but you're going
16 to all have your own phone.

17 MR. MINNICK: Well we don't really have that many
18 direct lines in our office so that's why. I'm one of the
19 few that have a direct line.

20 HEARING OFFICER CELLI: Well, I hope you have
21 enough to accommodate just the two of you for now.
22 Hopefully we won't go that long.

23 MR. MINNICK: Okay, I'll see what I can do.

24 HEARING OFFICER CELLI: Thank you. I appreciate
25 your accommodating us.

1 MR. MINNICK: Not a problem.

2 HEARING OFFICER CELLI: It makes for better
3 cross-examination, I think, to have them in a different
4 room.

5 MR. MINNICK: Okay.

6 HEARING OFFICER CELLI: Okay, great. So I'm
7 going to put you back on mute again, Mr. Minnick. I have
8 Gerry Beemis, Don Campbell, Mavis Scanlon.

9 So I'm waiting to see Mr. Campanella come on and
10 then I think we would get a summary from Mr. Marcus, if
11 you would, for the testimony as it related to the CEQA
12 documents out of the County of Imperial. And then I think
13 we're on to respondent's case in chief.

14 While we're waiting why don't you go ahead and
15 bring your motion, Mr. Ellison.

16 MR. ELLISON: Thank you, Officer Celli. As you
17 know, CURE has the burden of proof in this proceeding as
18 the complainant. As you know they filed a complaint that
19 was verified only by an attorney, not by an officer of
20 CURE. Pursuant to Code of Civil Procedure Section 446, a
21 complaint that is verified only by an attorney does not
22 establish any fact for the purposes of an adjudicatory
23 proceeding. So CURE has to meet its burden of proof
24 through its testimony, which we have just heard.

25 There are two issues in this proceeding. The

1 first is whether North Brawley and East Brawley are
2 essentially one project for the purposes of the Energy
3 Commission's jurisdiction. As you yourself noted, CURE's
4 witnesses said absolutely nothing about that.

5 With respect to the second issue, which is
6 whether individually North Brawley and East Brawley are
7 over 50 megawatts CURE offered two witnesses. And in
8 spite of some other convoluted and complex testimony,
9 when I asked Mr. Koppe the bottom line question of, do you
10 have an opinion as to whether these projects were over 50
11 megawatts pursuant to the Energy Commission's method of
12 calculating that, he said, no. And when I asked Mr.
13 Marcus whether he could testify that these projects were
14 capable of generating more than 49.5 megawatts he also
15 testified under oath, no.

16 What we have here is essentially no evidentiary
17 support for either of the claims that support this
18 complaint. So accordingly I am going to make separate
19 motions to dismiss with respect to each issue. And if
20 they are both granted, we're done and we can dismiss this
21 entire complaint. With that I would rest.

22 HEARING OFFICER CELLI: Thank you. I just want
23 to clarify for the record, though, that we do have
24 Exhibits 1 through 51 in the record. And that is some
25 evidence there. I'm not exactly sure if it all ties up

1 yet or not. But I wanted to be clear that there is more
2 evidence that just these two witnesses' testimony today.

3 MR. ELLISON: I understand that, Mr. Celli. But
4 I would point out that none of it was important enough to
5 be included in any of the direct testimony presented to
6 you. And if there was any significant information in
7 those documents relevant to these two issues I assume that
8 CURE would have called your attention to it in their
9 direct testimony. And they can certainly call your
10 attention to it in their response to my motion. I've
11 reviewed those documents. I don't think they support the
12 case either.

13 HEARING OFFICER CELLI: Thank you. We're going
14 to go off the record for a moment.

15 (Off the record at 3:17 p.m.)

16 (On the record at 3:19 p.m.)

17 HEARING OFFICER CELLI: We're back on the record.
18 Thank you again for indulging our momentary meetings every
19 so often.

20 We're going to let CURE respond briefly to the
21 statements made by Ormat with regard to the motion. This
22 is very brief. The inclination is probably to have the
23 parties brief this but we wanted to hear if there was
24 anything that CURE wanted to say in response.

25 MS. KLEBANER: Yes, thank you for the opportunity

1 to address this today, although we look forward to
2 briefing on the issue.

3 First I want to address the argument made by
4 respondent's counsel regarding the validity of the
5 complaint. The complaint is valid pursuant to Title 20,
6 Regulation Section 1231 which requires only that -- which
7 requires the complaint to state the name and address of
8 the parties, the statement of the facts, the statutes that
9 are alleged to be violated.

10 HEARING OFFICER CELLI: Actually I think the
11 motion is that the verified complaint wasn't signed by a
12 valid authority.

13 MS. KLEBANER: With respect to that point may
14 I --

15 MR. ELLISON: if I can just clarify and maybe
16 shorten this.

17 MS. KLEBANER: May I, may I continue with my
18 response before you allow the -- thank you.

19 MR. ELLISON: Very well. I was not saying the
20 complaint was not valid. I was simply saying that under
21 California law the things stated in the complaint are not
22 evidence in this proceeding to support the burden of
23 proof.

24 HEARING OFFICER CELLI: Okay, I'm sorry, I
25 misunderstood. Because I thought you were saying that it

1 wasn't signed by an appropriate person.

2 MR. ELLISON: Well, it was signed signed by an
3 attorney and under California law that doesn't establish
4 anything in it as a fact.

5 HEARING OFFICER CELLI: Go ahead, please.

6 MS. KLEBANER: Thank you for the clarification.
7 My response to the argument is that respondent has not
8 shown that a verification needs to be signed by an officer
9 with respect to CURE because CURE is not a business
10 association or a corporation. There are absolutely no
11 facts in the record which support that conclusion.

12 HEARING OFFICER CELLI: We've got that.

13 MS. KLEBANER: With respect to the substance of
14 argument made by respondent regarding whether CURE has
15 carried its burden today. First I will address the
16 aggregation issue.

17 The Commission's regulations for a complaint
18 investigation proceeding, Section 1230(a), states that a
19 complaint proceeding shall include an adjudicatory
20 proceeding in which the Commission determines whether the
21 matters alleged can be proved.

22 HEARING OFFICER CELLI: Maybe I can help focus
23 this. There's two issues. Is there jurisdiction because
24 either of these power plants have greater than 50
25 megawatts? Is there jurisdiction because these two power

1 plants are so interconnected as to operate as a single?

2 MS. KLEBANER: With respect to the issue of
3 aggregation, CURE has put on evidence to show by the
4 preponderance of evidence that the two projects should be
5 aggregated as one facility in accordance with the
6 Commission's decisions on the matter of aggregation. It
7 has proved that -- it has shown by the preponderance of
8 evidence that the facilities are proposed on a common
9 location, will be operated by -- operated, owned and
10 designed by one entity. That the two facilities were
11 planned as one larger project and that the facilities are
12 so closely interconnected that they share a facility such
13 as a substation as well as piping for cooling water. As
14 such the complainant has made its case.

15 HEARING OFFICER CELLI: And I just want to --
16 Okay, so --

17 MS. KLEBANER: To the degree that, to the degree
18 that respondent argues that we cannot make our case based
19 on exhibits rather than live testimony, that argument is
20 without merit because the Commission's regulations
21 presuppose an adjudicatory proceeding in which paper
22 exhibits can be submitted and reviewed, which is what we
23 have done here.

24 HEARING OFFICER CELLI: I don't think that's a
25 problem. What I would like to be able to point to or at

1 least look at is, when you say that they were -- for
2 instance, share cooling water? Where is that proof, in
3 what exhibit?

4 MS. KLEBANER: In our opening statement we
5 pointed the Committee to Exhibit 19.

6 HEARING OFFICER CELLI: Okay.

7 MS. KLEBANER: Which identifies that piping would
8 be extend -- which identifies a request by the respondent
9 for authorization for a permit from the county that would
10 allow them to extend piping for cooling water blow down to
11 be run from the East Brawley facility across the New
12 River.

13 HEARING OFFICER CELLI: Okay.

14 MS. KLEBANER: I would also remind, respectfully
15 remind the Committee that we have not yet had a chance to
16 cross-examine respondent's witness regarding the evidence
17 that they have submitted in response to our answer.

18 HEARING OFFICER CELLI: but the fact is, if they
19 wanted to they could rest on the state of the evidence as
20 it is right now. And so why I'm asking these questions is
21 because I need to make a determination. I've got a motion
22 pending for dismissal. And so --

23 MS. KLEBANER: With respect to --

24 HEARING OFFICER CELLI: No. For instance, the
25 substation. You said they share a substation. Can you

1 give us an exhibit number?

2 MS. KLEBANER: Yes, one moment, please.

3 HEARING OFFICER CELLI: Or exhibits, numbers.

4 MS. KLEBANER: This information, the information
5 that you're asking me to provide has already been provided
6 in our opening statement with specific references to
7 exhibits. I could give that, I could give that
8 presentation again if you would like.

9 HEARING OFFICER CELLI: Well no. What I'm
10 looking to do is, and if you'll give me a moment I will
11 find your opening.

12 MS. KLEBANER: We rest on the evidence that we
13 identified in our opening statement. We believe that
14 evidence meets the burden that has been set out for us in
15 this case to prove by the preponderance of evidence that
16 the two facilities should be considered one for the
17 purpose of Section 2500 of the Warren-Alquist Act.

18 HEARING OFFICER CELLI: All right. Okay, very
19 good. Well, we can leave it at that.

20 MS. KLEBANER: Thank you.

21 HEARING OFFICER CELLI: Thank you. Staff, for
22 staff any comment on the motion to dismiss?

23 STAFF COUNSEL OGATA: I probably should not make
24 a comment since, as I said before, we take sort of a
25 neutral role in this; the parties have more at stake than

1 we do. We were asked by the Committee to provide a
2 recommendation, we have done that. I guess if you really
3 want me to say something I would, I would say that --

4 HEARING OFFICER CELLI: I'm just giving you an
5 opportunity. Let your conscience be your guide, Mr.
6 Ogata.

7 STAFF COUNSEL OGATA: I would say that the
8 exhibits have been admitted into evidence. I believe that
9 there is at least a case that has been made by the
10 complainant.

11 I think a motion to dismiss is a very harsh
12 remedy in this case. And so I believe by the end of the
13 day you have heard all the evidence and at that point I
14 think you will be in a better position to decide. So I
15 guess just based on general judicial principles I would
16 not favor a motion to dismiss at this point in time.

17 HEARING OFFICER CELLI: Thank you. And County of
18 Imperial?

19 MR. WILKINS: The County will join in Ormat's
20 motion to dismiss regarding the issue of the 50 megawatt
21 generating capacity. both of CURE's witnesses testified
22 that they did not have knowledge of certain facts that
23 would potentially limit the facilities to produce more
24 than 49.9 megawatts. They said they did not have that
25 information, they had not reviewed enough documents to

1 provide an opinion on that.

2 There isn't documentation that I'm aware of, and
3 CURE has not pointed to documentation, that would show
4 that. There is no such restrictions here. And it is
5 their evidence, not the evidence of the County or Ormat,
6 through their rebuttal testimony or their directs, to
7 provide that evidence. And I don't think it would be
8 appropriate to allow CURE to elicit that evidence in the
9 County or Ormat's direct testimony.

10 So I think it is appropriate and important to
11 hear this motion now and to make a decision rather than
12 subject us to the possibility of proving CURE's -- of CURE
13 trying to attempt to cure its case through our own
14 witnesses here.

15 In regards to the aggregation issue. I have not
16 heard any testimony, as the Commission has acknowledged,
17 on this issue. And the documents at issue, there is
18 nothing in those documents, and I have taken a look at
19 them, that shows that these facilities would be commonly
20 shared. And they are applications, as I understand it.

21 MS. KLEBANER: May I ask a question? Is counsel
22 testifying to the generating capacity of either the East
23 Brawley or North Brawley plants?

24 MR. WILKINS: I am not.

25 HEARING OFFICER CELLI: Hold that question, Ms.

1 Klebaner, and let me hear what the County has to say.

2 MR. WILKINS: And finally, that the draft EIR is
3 exactly that, a draft EIR for the East Brawley project.
4 And a final EIR is being prepared at this point in time
5 and there could be changes to that project description or
6 changes -- it's perfectly appropriate under CEQA. So that
7 in and of itself is not evidence in this matter.

8 So I would close with that and join the motion.

9 HEARING OFFICER CELLI: Thank you for your
10 comments, thank you for your motion. And we're going to
11 go off the record for a moment.

12 (Off the record at 3:28 p.m.)

13 (On the record at 3:36 p.m.)

14 HEARING OFFICER CELLI: We're back on the record,
15 ladies and gentlemen. I note that Richard Cabanilla is
16 showing up in WebEx but I'm not sure he's got the ability
17 to communicate with us.

18 MR. WILKINS: If we could -- I understand he's in
19 a conference room. I believe that he went to the
20 conference room so he could get a direct line to be able
21 to call in but I don't know that. So maybe if we could
22 check online to determine whether he can hear us.

23 HEARING OFFICER CELLI: Let me do this. Mr.
24 Cabanilla, are you on the phone?

25 MR. CABANILLA: Yes.

1 HEARING OFFICER CELLI: Oh, very good. Thank
2 you. So we're good to go.

3 Now as to the motion to dismiss. The Committee
4 gave it considerable consideration and the determination
5 at this time is to continue to proceed. We're essentially
6 taking it under submission. It's not being ruled on,
7 we're not denying the motion. It's under submission; but
8 the Committee would like to proceed with the proceedings.

9 And so with that the first thing we needed to do
10 on the record was have Mr. Marcus -- sorry. Mr. Marcus,
11 if you could summarize for Mr. Cabanilla and Mr. Minnick
12 the statements, the testimony as it related to the CEQA
13 document provided by Imperial County.

14 MR. MARCUS: Yes. In Exhibit 52, which is the
15 hard copy that is more or less what my testimony was, at
16 page 4 I made a reference to the East Brawley draft
17 environmental impact report showing that there are placed
18 to be six OECs.

19 And then on page 9. Oh, and then again on page 8
20 I made a reference to the EIR showing that there are six
21 OECs.

22 And then on page 9 I again cited to the EIR as
23 showing a pump capability of 195,000 gallons per minute.

24 And I believe those two references to the number
25 of OECs and to the water pumping capacity were the only

1 references I made to the EIR.

2 HEARING OFFICER CELLI: Thank you very much. Go
3 ahead, Mr. Wilkins.

4 MR. WILKINS: Mr. Wilkins for County of Imperial.
5 A question about Exhibit 52. I have not shared that with
6 my clients. I realize it has not been marked as a
7 confidential exhibit but I actually assumed that it might
8 contain confidential information and therefore was not
9 able to share it with them. Can I get some clarification
10 on that, please?

11 HEARING OFFICER CELLI: It was marked for
12 identification. It has not yet been received into
13 evidence.

14 MR. WILKINS: It's just referred to. So I just
15 wanted to make --

16 HEARING OFFICER CELLI: We're just talking about
17 it. It's not in the record, it's just marked for
18 identification. There's an Exhibit 52 out there.

19 I am going to admonish all of the witnesses to
20 please be mindful of the fact that we are now back into a
21 public hearing and that we don't want to discuss
22 confidential information on the record or any of your
23 witnesses to do that.

24 So that's the status of Exhibit 52 at this time.

25 MR. ELLISON: And I would just add that with

1 respect to the statements that Mr. Marcus made, we don't
2 believe those are confidential, the statements that he
3 just summarized just now. But we do believe there is
4 confidential information in Exhibit 52. So to the extent
5 that we would get into further discussion of 52, that
6 might be a problem.

7 HEARING OFFICER CELLI: In the event that there
8 is a motion later on their rebuttal case then I would ask
9 that you please make sure to remind the Committee that
10 these are your concerns.

11 MR. ELLISON: We will.

12 HEARING OFFICER CELLI: Thank you. With that
13 then at this time it is respondent's case in chief.
14 Respondent, did you want to call your -- so thank you, Mr.
15 Marcus, you're excused, and I'm excusing Mr. Koppe. Thank
16 you, Mr. Koppe.

17 And with that I think we can turn off the --

18 MR. KOPPE: You're welcome. Thank you.

19 HEARING OFFICER CELLI: Thanks. The telephone
20 that we put on -- don't do that because who else is on
21 there?

22 THE REPORTER: Mr. Cabanilla.

23 HEARING OFFICER CELLI: Is coming that through
24 that phone? Okay, I'll just leave it on. Hopefully we
25 won't have too much interruption from that.

1 So Mr. Marcus, we're just going to let him vacate
2 his seat and move somewhere else.

3 The respondent Ormat Nevada, Inc. was going to
4 call a panel of several witnesses so why don't we go ahead
5 and get them sworn in right now. Come forward, please.

6 Mr. Marcus, your coat is still on your chair
7 there, you might want to pick that up.

8 MS. POTTENGER: Hearing Officer Celli, Don
9 Campbell, who is on the phone, is also part of our panel.

10 HEARING OFFICER CELLI: Okay. So he'll have to
11 be sworn in separately, Mr. Petty.

12 Whereupon,

13 CHARLENE WARDLOW

14 THOMAS BUCHANAN

15 ROBERT SULLIVAN

16 were duly sworn and testified as follows:

17 THE REPORTER: Please individually state and spell
18 your names for the record.

19 HEARING OFFICER CELLI: Into the microphone.

20 MR. SULLIVAN: Robert Sullivan, S-U-L-L-I-V-A-N.

21 MS. WARDLOW: Charlene Wardlow, C-H-A-R-L-E-N-E,
22 W-A-R-D-L-O-W.

23 MR. BUCHANAN: Tom Buchanan, B-U-C-H-A-N-A-N.

24 MS. POTTENGER: Hearing Officer Celli, while we
25 swear in Don Campbell may I approach to pass out these

1 exhibits that the witnesses will be discussing? These are
2 solely from Exhibit 200 and they have already been marked
3 as testimony.

4 HEARING OFFICER CELLI: Certainly, thank you. Go
5 ahead, Mr. Petty.

6 (No response to administration of the oath.)

7 HEARING OFFICER CELLI: Let me unmute him.
8 Mr. Campbell?

9 MR. CAMPBELL: Yes.

10 HEARING OFFICER CELLI: Okay, go ahead.

11 THE REPORTER: Let me administer this oath again
12 to you.

13 Whereupon,

14 DON CAMPBELL
15 was duly sworn and testified as follows:

16 THE REPORTER: Please state and spell your name
17 for the record.

18 MR. CAMPBELL: Don Campbell, C-A-M-P-B-E-L-L.

19 HEARING OFFICER CELLI: Thank you, Mr. Campbell.
20 The direct is with the respondent. For the record, Ms.
21 Pottenger is passing out certain documents that I believe
22 we have already received, excerpts from Exhibit 200.

23 MS. POTTENGER: To begin I'd like the panel to
24 please introduce yourselves again, briefly review your
25 qualifications and state the length of time in your

1 position with Ormat.

2 HEARING OFFICER CELLI: And before we do that,
3 just to save time, I'm wondering if we can poll the
4 parties and see if we can get a stipulation to their
5 expertise and then we wouldn't have to get into that. Can
6 you at least say each individual's area of expertise that
7 he will be testifying to, Ms. Pottenger?

8 MS. POTTENGER: Yes. Charlene Wardlow has been
9 the lead in permitting and licensing for the North Brawley
10 and East Brawley project, including doing the
11 environmental review process at the County.

12 Bob Sullivan is the vice president of development
13 in the US, please correct me if I'm wrong, for Ormat
14 Nevada and he will testify to the development of both the
15 North Brawley and the East Brawley projects, in addition
16 to certain engineering and other characteristics of the
17 projects.

18 Tom Buchanan is the engineer on the ground who
19 will be able to testify to the generating capacities of
20 both the North Brawley and the East Brawley project.

21 Finally, we have Don Campbell on the phone who is
22 a geothermal field resource expert and he will testify to
23 some of the resource constraints that both the North
24 Brawley and the East Brawley project have faced.

25 HEARING OFFICER CELLI: So I have that Don

1 Campbell is a geothermal field resource expert. I have
2 that Tom Buchanan is an engineer and a capacity expert. I
3 have that Robert Sullivan is a vice president of Ormat and
4 would testify as an expert, as an engineer in the
5 development of these two projects. Is that the field/area
6 of expertise? But I don't have Charlene Wardlow's. What
7 is her area of expertise?

8 MS. POTTENGER: Charlene Wardlow has been
9 responsible for the environmental review process and
10 permitting and working with Imperial County on the
11 licensing of both the North Brawley and the East Brawley
12 Project.

13 Both Ms. Wardlow and Mr. Sullivan are familiar
14 with the various agreements and permits that are
15 associated with each project.

16 HEARING OFFICER CELLI: Okay. So she would be
17 testifying, she'd be an expert in the permitting and
18 licensing of the North Brawley and East Brawley.

19 MS. POTTENGER: Correct.

20 HEARING OFFICER CELLI: I hope that's succinct
21 enough for everyone. I'm going to start with CURE. Would
22 you be willing to stipulate that these people have
23 expertise in their stated area of expertise?

24 MS. KLEBANER: Yes, CURE stipulates to the
25 qualifications of the witnesses.

1 HEARING OFFICER CELLI: Thank you. Mr. Ogata?

2 STAFF COUNSEL OGATA: Staff stipulates.

3 HEARING OFFICER CELLI: Mr. Wilkins?

4 MR. WILKINS: The County of Imperial stipulates?

5 HEARING OFFICER CELLI: Thank you. Then these
6 witnesses, Robert Sullivan will be deemed an expert in the
7 development and engineering vis-à-vis Ormat; Charlene
8 Wardlow is an expert in the permitting and licensing of
9 North Brawley and East Brawley; Tom Buchanan is an
10 engineer and would be testifying as an expert with regard
11 to capacity; and Don Campbell would be an expert in
12 geothermal field resources. And with that then you are
13 experts and we don't need to go through your résumés and
14 we can just get right into their testimony. Thank you.

15 DIRECT EXAMINATION OF ROBERT SULLIVAN

16 BY MS. POTTENGER:

17 Q Mr. Sullivan, are you familiar with the North
18 Brawley geothermal development project?

19 MR. SULLIVAN: Yes.

20 MS. POTTENGER: When did the development of the
21 North Brawley Project begin?

22 MR. SULLIVAN: We submitted the conditional use
23 permit application in June of 2007?

24 MS. POTTENGER: Is the conditional use permit
25 application for North Brawley the document provided as

1 Appendix C to Exhibit 200?

2 MR. SULLIVAN: Yes.

3 MS. POTTENGER: Has the conditional use permit
4 application for North Brawley been approved?

5 MR. SULLIVAN: Yes.

6 MS. POTTENGER: Can you please provide a brief
7 description of the North Brawley project.

8 MR. SULLIVAN: The North Brawley project is a 33
9 megawatt geothermal facility based on binary water-cooled
10 technology. It's situated a few miles north of the city
11 of Brawley.

12 It has an extensive well-fill around the
13 intersection of Hoveley and Andre Road. It takes water
14 for its coolant water supply from the Imperial Irrigation
15 District from a -- through a pipeline approximately three
16 miles long to the west from the West Side Main.

17 It sells its power to Southern California Edison
18 under a long-term power purchase agreement and wields that
19 power over Imperial Irrigation District's transmission
20 system.

21 It utilizes the binary technology, as I said,
22 which allows the development of moderate temperature
23 geothermal resources. In this case it's completely fluid
24 in nature, no steam. We pump the fluid from depth. At
25 Brawley it's approximately 2,000 feet.

1 We send it through extensive piping systems to
2 the power plant, which consists of five Ormat energy
3 converters. The Ormat energy converters convert the heat
4 from the geothermal by transferring it to a second binary
5 fluid, isopentane. The isopentane is to convert it to a
6 high temperature/ high pressure vapor, which is sent to
7 turbines, which turns a generator and makes electricity.

8 The cold geothermal fluid is then sent through
9 another piping system to the injection wells.

10 MS. POTTENGER: Thank you, Mr. Sullivan. I would
11 like to draw your attention, please, to Exhibit 200,
12 Figure 4 of Appendix B that I just passed out to the room.

13 MR. SULLIVAN: Yes.

14 MS. POTTENGER: Is this a representation of
15 Ormat's water-cooled binary geothermal power plant?

16 MR. SULLIVAN: Yes.

17 MS. POTTENGER: And can you please just walk us
18 through a little bit and describe how this process works.

19 MR. SULLIVAN: Sure. Again, binary technology.
20 Because we're developing a moderate temperature resource,
21 geothermal resource, it's more efficient. You generate
22 electricity using a secondary fluid, a working fluid that
23 boils at a much lower temperature than water. And also
24 lower temp resources like this typically require the
25 resource to be pumped. So we'll drill wells, we'll insert

1 production pumps, as we call them, into the wells. And
2 pump the fluid from the wells, again. An extensive well
3 field extends one or two miles north and south of the
4 facility.

5 We'll send the fluid to a series of Ormat energy
6 converters which are modular in nature. The fluid goes
7 into vaporizers, which boils off the isopentane. And then
8 the pentane is transported to a turbine, it turns the
9 turbine. It turns the turbine, they exhaust out into a
10 condenser where the cooling water from the cooling tower
11 removes the heat and condensation. It condenses the
12 binary fluid, the isopentane, which is reused in the cycle
13 over and over again, which is then pumped to the vaporizer
14 using a motive-fluid pump.

15 The cooler geothermal fluid, we extract a little
16 bit more efficiency by sending it to the pre-heater and
17 probably take 150 to 160 degrees of temperature total out
18 of the brine. And then this colder fluid is sent to
19 injection wells, which ultimately provide pressure support
20 and gets reheated and is reused again in production fluid.

21 MS. POTTENGER: Thank you. And you mentioned
22 Ormat energy converters. Can you please describe --
23 pardon me.

24 In your opinion is this a technology that is
25 unique to Ormat?

1 MR. SULLIVAN: No, the organic rankine cycle has
2 been around for a long time. There are other people
3 selling organic rankine cycle power plants. Ormat has
4 been in the business longer than anyone else; the
5 technology has been around for our company for 40 years or
6 so. And our design has improved over time and, in my
7 opinion, is superior to our competition.

8 MS. POTTENGER: Thank you. And are you familiar
9 with the East Brawley geothermal development project?

10 MR. SULLIVAN: Yes.

11 MS. POTTENGER: And when did the development of
12 the East Brawley Project begin?

13 MR. SULLIVAN: We submitted the CUP application,
14 the conditional use permit application, in August of 2008.

15 MS. POTTENGER: And has that application been
16 revised since that date?

17 MR. SULLIVAN: Yes, it was revised in January of
18 2010.

19 MS. POTTENGER: Is the revised --

20 (Echoing.)

21 HEARING OFFICER CELLI: One moment. Can I ask,
22 Ms. Gulesserian, I don't know if you can see if there's a
23 mute button on that thing. Thank you. Hopefully that
24 will keep that line quiet.

25 Mr. Petty, before I proceed, by muting that are

1 you no longer able to hear Mr. Campbell? Because he's on
2 WebEx.

3 MR. CAMPBELL: I'm on.

4 HEARING OFFICER CELLI: So I just want to turn
5 that one off. Okay, we're with you, Mr. Campbell, that's
6 fine. Okay, I'm sorry for the interruption. Where were
7 we? Whose question?

8 MS. POTTENGER: That was me.

9 Mr. Sullivan, is the revised conditional use
10 permit for East Brawley the document provided as Appendix
11 B to Exhibit 200?

12 MR. SULLIVAN: Yes.

13 MS. POTTENGER: Has the conditional use permit
14 application for East Brawley been approved?

15 MR. SULLIVAN: No.

16 MS. POTTENGER: Can you please provide a brief
17 description of the East Brawley project.

18 MR. SULLIVAN: The East Brawley project, again,
19 is a water-cooled binary project based on a fluid-based
20 geothermal resource of moderate temperature. It's located
21 several miles north of the town of, or the city of Brawley
22 in Imperial County, California. And it's almost two miles
23 to the east of the North Brawley facility on the other
24 side of the New River. It doesn't have a power purchase
25 agreement nor does it have an interconnect agreement. Nor

1 does it have a water contract or a supply of water yet.

2 And the facility is designed differently than the
3 North Brawley facility and that is some significant
4 changes. One is it uses a regenerative thermal oxidizer
5 for its main emission point, where the North Brawley
6 facility uses a rubber system. It has a recuperator
7 design integrated in the OEC. And of course it's a much
8 smaller facility based on three OECs, than the five at
9 North Brawley. I think that's it.

10 MS. POTTENGER: What is the current development
11 timeline for East Brawley?

12 MR. SULLIVAN: We hope to be able to go
13 commercial before the end of 2013. So December of 2013
14 would be the current timeline.

15 MS. POTTENGER: I'd like to draw your attention
16 to Figure 2 from Exhibit 200, Appendix B. That document
17 was just passed around.

18 MR. SULLIVAN: Yes.

19 MS. POTTENGER: Can you please identify this
20 document.

21 MR. SULLIVAN: This is the North Brawley
22 Geothermal Overlay Zone Map, the geothermal well field.

23 MS. POTTENGER: And is North Brawley and East
24 Brawley on this map?

25 MR. SULLIVAN: Yes.

1 MS. POTTENGER: Can you please show to the
2 Committee, please, where North Brawley is on this map.

3 MR. SULLIVAN: North Brawley is the blue square.

4 MS. POTTENGER: And where is East Brawley on this
5 map?

6 MR. SULLIVAN: East Brawley is the pink square or
7 trapezoid.

8 MS. POTTENGER: Thank you. How far apart are
9 those two sites that you just identified?

10 MR. SULLIVAN: I think it's slightly less than
11 two miles, one and three-quarter mile.

12 MS. POTTENGER: And is North Brawley operations?

13 MR. SULLIVAN: Yes.

14 MS. POTTENGER: How long has it been operational?

15 MR. SULLIVAN: Initial operation was in December
16 of 2008, so almost three years now.

17 MS. POTTENGER: You mentioned that there was a
18 power purchase agreement for North Brawley. Is there a
19 power purchase agreement for East Brawley?

20 MR. SULLIVAN: No.

21 MS. POTTENGER: Are there any shared facilities
22 between North Brawley and East Brawley?

23 MR. SULLIVAN: No.

24 MS. POTTENGER: And you stated that there is a
25 water supply agreement between North Brawley and Imperial

1 Irrigation District, is that correct?

2 MR. SULLIVAN: That's correct.

3 MS. POTTENGER: And is that the document provided
4 as Appendix G to Exhibit 200?

5 MR. SULLIVAN: Yes.

6 MS. POTTENGER: Will East Brawley be a party to
7 the water supply agreement between North Brawley and
8 Imperial Irrigation District?

9 MR. SULLIVAN: No. And it's clearly stated in
10 the agreement in Section 3.1 that it's only for North
11 Brawley.

12 HEARING OFFICER CELLI: What page is that,
13 please?

14 MR. SULLIVAN: Page three.

15 HEARING OFFICER CELLI: Paragraph?

16 MR. SULLIVAN: Section 3.1. Such water as may be
17 required by Ormat for use and incidental to the operation
18 of the project and for no other purpose.

19 MS. POTTENGER: And just to clarify, Mr.
20 Sullivan. How is "project" defined in that water supply
21 agreement?

22 MR. SULLIVAN: A 49.9 megawatt geothermal power
23 plant. That's the Section 1.1 on page one.

24 MS. POTTENGER: Thank you. You stated that North
25 Brawley has an interconnection agreement. Does East

1 Brawley have an interconnection agreement?

2 MR. SULLIVAN: No, it does not.

3 MS. POTTENGER: And will East Brawley become a
4 party to the interconnection agreement for North Brawley?

5 MR. SULLIVAN: No, it will not.

6 MS. POTTENGER: Do North Brawley and East Brawley
7 rely on each other in any way?

8 MR. SULLIVAN: No, they do not rely on each other
9 in any way.

10 MS. POTTENGER: Has Ormat internally treated
11 these two projects as separate and distinct projects?

12 MR. SULLIVAN: Yes.

13 MS. POTTENGER: Mr. Sullivan, you were in the
14 room previously and heard Mr. Marcus' and Mr. Koppe's
15 testimony. Do you have any specific responses?

16 MR. SULLIVAN: Yes I do. I was struck by several
17 things. One, there's a lot of assumptions. One of them
18 -- and I'll go through some of my concerns.

19 A very specific one was that there seemed to be
20 no other limitations to the power plant besides what was
21 discussed extensively about the OEC and generator ratings
22 and geothermal reservoir and production pumps.

23 There's significant other constraints that we
24 rely upon when we design a power plant. One of those is
25 transmission. Our transmission is limited for North

1 Brawley at 50 megawatts. Actually 49.9.

2 Piping systems. At North Brawley we installed
3 some 80,000 feet of pipe so this is not one of these
4 pennywise or pound foolish items. The piping was
5 significant. It was probably one of the major cost
6 factors in the plant. And to ignore the piping when you
7 look at the limitations of the system is not correct. And
8 piping is, specifically in a geothermal power plant, is
9 critical.

10 For people not experienced in geothermal some of
11 the key considerations for design include corrosion. The
12 Brawley KGRA is known for its corrosive characteristics of
13 its fluid and its sand, so it brings both a chemical
14 corrosive nature and a erosive chemical nature.

15 Over time -- and we have been designing power
16 plants and I have been involved in power plants for 20
17 years, geothermal power plants. Key considerations that
18 go into the design of a power plant are based on fluid
19 velocities. You design power plants, and specifically
20 piping systems, to maintain a certain fluid velocity. The
21 fluid velocity is critical for a geothermal power plant
22 because too fast of a fluid velocity you increase your
23 erosive natures of fluid. In Brawley this is critical
24 because of the sand that is being carried up from
25 production pumps. Also because of the chemical content.

1 You have to keep the fluid at a certain velocity. If you
2 go too slow you'll increase scaling and corrosion because
3 of stagnant areas.

4 The about increasing flow five percent with no
5 consideration to the piping system is poor engineering.
6 It would have an impact and the piping system was designed
7 for a 49.9 megawatt facility for a certain flow rate with
8 a certain range of velocities to deal with these very
9 serious issues of corrosion and erosion. And a piping
10 system is significant. As I said, 80,000 feet of pipe was
11 installed for Brawley.

12 There was miles of cabling, my next issue. To
13 discount the cabling required to connect all the auxiliary
14 loads is again poor engineering.

15 Other issues. The OEC was treated as an off the
16 shelf type of component looking only at the generator for
17 capacity. It's not off the shelf. We optimize the OEC
18 based on the resource given to us. And we do that, we do
19 that in context of many constraints. Transmission is one;
20 the permits are another.

21 Our expectations of velocities and chemical
22 characteristics of the flow, how dirty it is. These are
23 all considerations that go into the design of the OEC. To
24 say that you can increase flow five percent through an OEC
25 and because the generator has the margin, is wrong. The

1 OEC is not a generator.

2 And there was a comment made about a proportional
3 increase for increasing brine five percent, you'll get an
4 increase of five percent on gross power is not correct.
5 It's not like opening a steam valve on a turbine. This is
6 an OEC, which I discussed. An OEC has heat exchangers.
7 Quickly, there's probably in one OEC module, there's
8 upwards of 16 vessels that we use to transfer heat from
9 the fluid to the isopentane and then put that pentane into
10 the turbine.

11 Ignoring this and the design consideration we
12 take and properly putting the correct amount of heat
13 transfer surface to get the transfer of heat for the fluid
14 flow we design for, at the velocities we need, is is poor
15 engineering.

16 There was also an assumption made that we design
17 the plant to maximize power. I heard this. This is not
18 true. We design the plant based on numerous constraints
19 that I already discussed. The best example is the fact
20 that at North Brawley, as we discussed, there was in the
21 design at one to go to six, to have OECs. This is because
22 we weren't sure of the temperature of the flow we'd get
23 from the resource. As said by one of the witnesses,
24 things are moving around often in geothermal power plant
25 development because you're developing the well field, the

1 field at the same time you're learning.

2 One of the advantages that Ormat has in the
3 market is the fact that we can optimize the design as we
4 move through the design process and we find out
5 information about the well field. In this case there was
6 significant change in the well field. Enough so that we
7 were able to extract the same amount of power, the 49.5
8 megawatts, from five OECs instead of six.

9 This shows the fact that conceptually how we're
10 thinking is we have a hard limit of 49.5. It's
11 constrained by transmission. It's constrained by our
12 economics of the project being economic. And we design
13 accordingly. And we designed 49.5 and we found we could
14 do it with less heat transfer surfaces because the
15 temperature of the fluid increased. We could do it with
16 less heat transfer so we dropped an OEC from the design.

17 The point I'll make, there was a lot of
18 discussion about our 13 production pumps at North Brawley
19 and the fact that we'll get 2,060 gallons per minute out
20 of them. Currently at North Brawley we have 16 production
21 pumps and we're only getting 33 megawatts. So I'm not
22 sure how this fits in to the 2,000 gallon per minute
23 justification that the previous witnesses were talking
24 about in justifying our facility over 50. Currently we
25 have 16 of these production pumps and we're making 33

1 megawatts.

2 Another observation I made. No witness
3 considered the changes in the resource temperature.
4 Slight changes in resource temperature change
5 significantly heat rate or efficiency. A five degree
6 change in resource temperature will move the heat rate
7 well over three percent, which is what one of the
8 witnesses was discussing as the potential margin at North
9 Brawley.

10 Both witnesses discussed margins in design. Both
11 witnesses said it's typical and usual to have margin in
12 design for engineering. And both witnesses assumed that
13 Ormat assumed that this margin could be operated
14 continuously. This is a double assumption that is not
15 true.

16 We design in accordance with good engineering
17 practices. And there's margin in design. But that margin
18 is there not to be exploited, because you need that to be
19 prudent and in compliance with our agreements, which
20 require prudent utility practice to operate the facility
21 and to design the facility.

22 And it's extremely critical in a geothermal
23 environment where if you see, if you go into margins on
24 production pumps or you go into margins on piping systems
25 and velocities, you will wear those piping systems out

1 very quickly and cause failure.

2 Another observation. Some discussion about
3 overlap in the well field. I can tell you there is
4 absolutely no overlap in the well fields between East
5 Brawley and North Brawley. This is complete confusion and
6 is not true.

7 Another observation. Very clearly it was
8 testified to that a five percent increase in design flow
9 resulted in a five percent increase in gross. I talked
10 about it briefly and there was a comment about turbine
11 efficiency at this point being relatively flat.

12 Again, these are -- this is testimony, it's not
13 in the context of a binary geothermal power plant where
14 you open a valve and send steam to a turbine. Here you're
15 sending five percent more fluid through a system that's
16 designed for five percent less and expect all that energy
17 to be directly sent to the turbine. It's not true.

18 What happens is you have increased diminishing
19 returns because the piping system is not designed for it.
20 You have increasing differential pressure drop, increasing
21 head on your production pumps, which increases parasitic
22 load. You have potential limit on the motive fluid pumps
23 that have to transfer that heat to the turbine, for five
24 percent more flow. The motive fluid pump is not
25 necessarily designed --it's not designed for the five

1 percent more flow, it's designed for its design point.

2 Five percent more flow, even -- it may not even
3 be the potential to go in the margin. In most cases there
4 is no margin there. The pump will just simply stop
5 working at its design point because the pressures required
6 and the flows required to get the five percent more power
7 that someone has assumed we're going to get gross.

8 That's my initial observations.

9 MS. POTTENGER: Thank you, Mr. Sullivan.

10 HEARING OFFICER CELLI: Before you ask your next
11 question I want to speak to the folks on the phone. It's
12 ten after four and we had made a general estimate that we
13 would take public comment at four o'clock and it looks
14 like we're off by quite a bit.

15 I just want to state for the public's benefit
16 that we will be taking public comment at the close of
17 testimony today. We have several parties to get through.
18 So I can't even give you an estimate but I can tell you
19 it's probably not going to be in the next hour, hour and a
20 half. So hang in there, ladies and gentlemen, and we will
21 take public comment as soon as we close the hearing.

22 So I'm sorry, Ms. Pottenger, go ahead.

23 MS. POTTENGER: Thank you.

24 DIRECT EXAMINATION OF THOMAS BUCHANAN

25 BY MS. POTTENGER:

1 Q Mr. Buchanan, are you familiar with the
2 Commission's methodology for calculating the generating
3 capacity of a facility for the purpose of assessing the
4 commission's jurisdiction?

5 A: Yes.

6 MS. POTTENGER: Can you please describe what this
7 methodology is?

8 MR. BUCHANAN: It's a three part process. The
9 first part is to determine the gross rating of a facility.
10 This is done at the maximum input conditions. And for
11 baseload operation like this it's also done at ambient,
12 average ambient annual conditions.

13 The second part is determination of the auxiliary
14 loads associated with the facility under those same
15 conditions for the gross rating determination.

16 And lastly, the determination of the net capacity
17 is the difference between that gross rating and the
18 auxiliary bonus.

19 MS. POTTENGER: At the designated design point
20 what is the net generating capacity of North Brawley as
21 calculated pursuant to the Commission's regulations?

22 MR. BUCHANAN: The next capacity was generated at
23 49.5 megawatts.

24 MS. POTTENGER: And what is the maximum gross
25 rating?

1 MR. BUCHANAN: The gross rating was calculated at
2 72.8 megawatts.

3 MS. POTTENGER: And what is the minimum auxiliary
4 load?

5 MR. BUCHANAN: Auxiliary load was calculated at
6 22.6 megawatts plus some electrical losses.

7 MS. POTTENGER: Mr. Buchanan, have you reviewed
8 Exhibit 300, which is staff's assessment of the generating
9 capacities of North Brawley and East Brawley?

10 MR. BUCHANAN: Yes I have.

11 MS. POTTENGER: And is Table 1 the description of
12 the generating capacity and auxiliary loads for North
13 Brawley, correct?

14 MR. BUCHANAN: I don't have that document up
15 here, could I take a look at it quickly?

16 HEARING OFFICER CELLI: We're talking about
17 Exhibit number 300?

18 MS. POTTENGER: Exhibit 300.

19 MR. BUCHANAN: Yes, I believe this is the table
20 that Ormat submitted.

21 MS. POTTENGER: And is North Brawley achieving
22 this net generating capacity right now?

23 MR. BUCHANAN: No, unfortunately not.

24 MS. POTTENGER: What is North Brawley's current
25 generating capacity?

1 MR. BUCHANAN: The capacity, the current capacity
2 -- there was recently a capacity test done for PPA
3 purposes, which resulted in about 33 megawatts.

4 MS. POTTENGER: What is North Brawley's average
5 net generation?

6 MR. BUCHANAN: The current operation is averaging
7 somewhere in the range of 25 megawatts.

8 MS. POTTENGER: With the resource as it is today
9 could you drill another well and increase the capacity of
10 this project beyond what you are producing today?

11 MR. BUCHANAN: No. There's certain technical
12 limitations to increasing flow through the facility. In
13 addition to that there's economic and contractual
14 constraints.

15 As far as the technical limitations to increasing
16 capacity with increasing brine flow is that as the -- the
17 system is designed at the maximum input. This means that
18 most of the components are at or near their best
19 efficiency point. As you increase flow beyond that
20 efficiency point the efficiency starts to fall off. In
21 other words, as the flow goes up the gross generation
22 tends to flatten out. This is a logarithmic relationship.

23 At the same time as we try to increase flow
24 through the facilities the demand on the auxiliaries,
25 their efficiencies start to fall off as well. So in that

1 case as we increase brine flow the auxiliary loads tend to
2 go at an accelerated upward rate, which is an exponential
3 function.

4 So we have gross generation going at a
5 logarithmic rate and we have auxiliaries going at an
6 exponential rate. And we don't believe that we would get
7 any significant or real increase in generation due to
8 those reasons.

9 MS. POTTENGER: Turning to East Brawley. At the
10 designated design point what is the net generating
11 capacity of East Brawley at full build out, calculated
12 pursuant to the Commission's regulations?

13 MR. BUCHANAN: The net generation capacity was
14 calculated at 49.5 megawatts.

15 MS. POTTENGER: And what is the maximum gross
16 rating?

17 MR. BUCHANAN: The maximum gross was calculated
18 at 69.8 megawatts.

19 MS. POTTENGER: And what is the minimum auxiliary
20 load?

21 MR. BUCHANAN: Auxiliary loads were calculated at
22 19.6 megawatts plus some electrical losses.

23 MS. POTTENGER: And have you reviewed Table 2
24 from staff's Exhibit 300?

25 MR. BUCHANAN: Yes.

1 MS. POTTENGER: And is that a correct
2 representation of the gross and auxiliary loads for East
3 Brawley?

4 MR. BUCHANAN: Yes.

5 MS. POTTENGER: At the designated design point
6 what is the net generating capacity of East Brawley as
7 will be initially constructed, calculated pursuant to the
8 Commission's regulations?

9 MR. BUCHANAN: The current net generating
10 capacity of East Brawley has -- the conceptual design has
11 been revised down about 30 megawatts. That's due to
12 resource constraints.

13 MS. POTTENGER: You've testified to certain
14 engineering restraints on the generating capacity of these
15 two projects. Are there any other restraints that affect
16 the generating capacity of North Brawley and East Brawley?

17 MR. BUCHANAN: There are. There's economic
18 constraints, there's contractual constraints. That was
19 mentioned earlier. With the diminishing return of trying
20 to put additional fluid through the facility there's
21 significant capital costs required in drilling additional
22 production wells and adding additional pumping capacity.
23 Drilling additional injection wells, that would be a
24 significant consideration, considering the diminished
25 return on that investment.

1 We talked a little bit about there are some
2 constraints in the conditional use permit, constraints in
3 the air quality permits. In addition to those
4 constraints, operating above the design point, as stated
5 earlier, is not a prudent operation of the facilities. As
6 we continue to try and push additional fluid through we
7 tend to shorten the life expectancy of equipment, running
8 it beyond the maximum design.

9 We have contractual requirements that actually
10 require us to use prudent practices for exactly those
11 reasons and not to operate in the margin on a continuous
12 basis.

13 MS. POTTENGER: Thank you.

14 Mr. Campbell, are you on the phone?

15 HEARING OFFICER CELLI: He will be in a moment.
16 He is now.

17 MR. CAMPBELL: I have been unmuted?

18 HEARING OFFICER CELLI: Yes.

19 DIRECT EXAMINATION OF DONALD CAMPBELL

20 BY MS. POTTENGER:

21 Q Hello, Mr. Campbell. Thank you for being patient
22 with us today. We'd like to discuss the resource
23 constraints on the generating capacities of North Brawley
24 and East Brawley. Can you please describe the resource
25 constraints at the North Brawley project site.

1 A As to specifically at North Brawley our
2 generation has been primarily limited by injection
3 capacity since we started up in late 2008, early 2009.

4 The injection wells have very fine grain sand and
5 the porous space between those sand grains tends to plug
6 up very rapidly with the produced fines from the
7 producers. By "fines" I mean clays and silts that are
8 produced from the production wells along with some sand.

9 And it will be -- at this point we have largely
10 solved that problem with improved sand separators and
11 filtrations. And the amount of produced solids from the
12 producers is declining over time.

13 However, with the injectors that we have we have
14 done successive cleanups, we've tried a number of other
15 experimental remedies and even redrilling some of the
16 wells and adding injection wells. But we have not yet
17 succeeded in achieving the needed injection capacity for
18 the North Brawley project by how much fluid it could
19 produce. We can't run it through the power plant and
20 inject it.

21 We also have been apprised of other problems with
22 the injection now. That the injection wells themselves,
23 their fans have proven to be unstable with time because
24 the material between the sand grains is dissolved by the
25 injectate. And this progresses -- disaggregation has

1 resulted in mobilizing finds from the formation itself in
2 the injection wells. So that also plugs them up.

3 And lastly, in the wells where we have coarser
4 grained sand and good permeability and they don't plug
5 nearly as easily we have some sands that are building up
6 pressure because they are not well-connected to the
7 production well sands. -- environment and with lots of
8 faultings so there's some discontinuity in some of the
9 sand. This also results in declining activity at the
10 time.

11 As far as East Brawley. We're going to have the
12 same kind of injection problems which we will need to
13 solve. And in addition the area available for development
14 at East Brawley is quite a bit smaller than that for North
15 Brawley. It's been further made smaller by the fact that
16 four of the six exploration wells drilled on the east side
17 of the river were colder than expected.

18 These were originally going to be East Brawley
19 producers. They have been converted now to injectors and
20 incorporated in the North Brawley project because we needed
21 the injection capacity. That leaves us an even smaller
22 area to develop for the East Brawley project. And that's
23 primarily the reason it's been reduced to a 30 megawatt
24 expectation. That --

25 MS. POTTENGER: Thank you. I'm sorry, did you

1 have something to add, Mr. Campbell?

2 MR. CAMPBELL: Not really that hasn't been
3 covered by Bob or Tom.

4 MS. POTTENGER: Mr. Campbell, did you hear Mr.
5 Marcus' testimony regarding East Brawley and that no power
6 would be necessary for reinjection. Is that correct?

7 MR. CAMPBELL: No, not at all. Our average
8 injection pressure is around 350 PSI. We have some wells
9 that require as much as 500 PSI to inject into them. And
10 there's no reason it would be any different at East
11 Brawley than it is at North Brawley.

12 MS. POTTENGER: Thank you. And did you hear Mr.
13 Sullivan's response to the testimony of Mr. Marcus and Mr.
14 Koppe?

15 MR. CAMPBELL: Yes.

16 MS. POTTENGER: And did you have anything to add
17 to that response?

18 MR. CAMPBELL: Not really. Bob covered it very
19 well, the issues we have. One thing I could add, they
20 seem to be focusing a lot on the pump power. And pumps is
21 one thing that burns out very rapidly into your thermal
22 services. As Bob noted, by erosion and corrosion. And so
23 we design for an average life, not -- so they are
24 over-designed if you assume perfect operations as new.
25 But we still wind up replacing them very frequently. So,

1 anyway, that's my observation on Mr. Marcus' testimony.

2 MS. POTTENGER: Thank you, Mr. Campbell.

3 RESUMED DIRECT EXAMINATION OF ROBERT SULLIVAN

4 BY MS. POTTENGER:

5 Q Mr. Sullivan, Mr. Campbell just discussed the
6 resource constraints that the North Brawley project had
7 been facing. Is this resource constraint reflected in the
8 North Brawley power purchase agreement?

9 A Yes. We conducted a capacity demonstration test
10 in accordance with the PPA earlier this year in the
11 spring, I believe in May, and the capacity was set at
12 slightly over 33 megawatts.

13 MS. POTTENGER: We've heard some discussion about
14 the power purchase agreement for North Brawley being 50
15 megawatts. Why was a power purchase agreement for North
16 Brawley signed for 50 megawatts if the designated design
17 point was 49.5 megawatts?

18 MR. SULLIVAN: We're talking about apples and
19 oranges. In one case there's a calculated number based on
20 the design point and then some megawatts. The PPA is a,
21 is a contract that's based on megawatt hours. In fact,
22 the commitment in the power purchase agreement is closer
23 to 43 megawatts based on the contractual commitment.

24 We assume, and the contract assumes and we're
25 bound by it, an availability factor, a capacity factor of

1 95 percent and then a hurdle rate of an additional 90
2 percent. So actually the expected generation in
3 accordance with the power purchase agreement is closer to
4 43 megawatts than the 50. That's relevant to the heat and
5 mass balance, which is the basis of the 49.5 and the
6 design point basis. There is no relation with the power
7 purchase agreement.

8 MS. POTTENGER: You stated previously that East
9 Brawley does not have a power purchase agreement. When
10 East Brawley is built will East Brawley sell to Southern
11 California Edison under the North Brawley power purchase
12 agreement?

13 MR. SULLIVAN: No.

14 MS. POTTENGER: Turning to the interconnection of
15 the North Brawley project. Was a system impact study
16 prepared for North Brawley?

17 MR. SULLIVAN: Yes it was.

18 MS. POTTENGER: And what was the scope of the
19 system impact study?

20 MR. SULLIVAN: The system impact study performed
21 with Imperial Irrigation District looked at 150 megawatts
22 of generation; 100 being injected into the system, 50
23 megawatts leaving the system and 50 megawatts staying in
24 the system and then 50 megawatts of load to generate those
25 first 100.

1 So I'll say it again. It's based on 150
2 megawatts. One hundred megawatts of generation, 50
3 staying in the Valley in their IID system, 50 leaving.
4 And then 50 megawatts of, for lack of a better word, house
5 load. And the reason for that is as part of the
6 interconnection study -- the system impact study, I'm
7 sorry, there's several things that you have to look at.
8 Power flows are one, that's critical when you're looking
9 at the 50 megawatts leaving and the 50 megawatts staying
10 and whether or not the system can handle that power flow.

11 And as importantly, short circuit duty. For the
12 150 megawatts what the Imperial Irrigation District is
13 concerned about when it comes to any transmission service
14 provider is the short circuit duty. Physically, how big
15 of a short circuit you can create by the installed copper
16 or the installed generating capacity. So in that case
17 it's important to look at the total gross capacity, which
18 includes -- basically it's a surrogate for the amount of
19 copper installed in the generators. This is why 150 was
20 studied.

21 The 100 was -- the first 50 leaving the system
22 was envisioned to be North Brawley. It's 50 megawatts of
23 generation. And then a second 50 was contemplated at that
24 time as a separate phased approach to another development,
25 which turned out to be East Brawley, eventually. But at

1 that time we're just looking at a phased approach.

2 And typical for early development you try to
3 understand how much transmission capacity is there and
4 study for it because it usually takes -- I'm sure many
5 people in this room know better than me, but it takes
6 years and years and years to get that capacity.

7 MS. POTTENGER: Thank you. And when you say 50
8 megawatts from North Brawley. At the time the system
9 impact study was conducted was that an estimation of the
10 potential capacity from North Brawley?

11 MR. SULLIVAN: Yeah. And specifically its
12 facilities agreement, which is the next step to the
13 interconnection agreement, references 49.9. It was an
14 estimate. And again, it was looking at the potential
15 capacity there because it takes years to generate -- it
16 takes years to acquire the transmission capacity.

17 MS. POTTENGER: Thank you. Have you reviewed
18 CURE's complaint, which has been submitted as Exhibit 1?

19 MR. SULLIVAN: Yes.

20 MS. POTTENGER: On page five of CURE's complaint
21 CURE states that, quote, "In 2007 Ormat commenced
22 developing a 150 megawatt geothermal facility in the North
23 Brawley known geothermal area by entering into a facility
24 study agreement with the Imperial Irrigation District."
25 End quote. Is this statement correct?

1 MR. SULLIVAN: We did, we did a system impact
2 study for 150 megawatts but 150 megawatts does not
3 translate to a 150 megawatt generation project, as I
4 explained.

5 MS. POTTENGER: Is Ormat developing a 150
6 megawatt geothermal facility in the North Brawley KGRA?

7 MR. SULLIVAN: No.

8 MS. POTTENGER: On page 11 of CURE's complaint
9 CURE states that the North Brawley power purchase
10 agreement contains, quote, "An option to increase sales to
11 100 megawatts of generation." End quote. Is this
12 statement correct?

13 MR. SULLIVAN: The option no longer exists; it's
14 no.

15 MS. POTTENGER: On page 15 of CURE's complaint
16 CURE states that, quote, "Ormat has separately contracted
17 for the sale of 50 megawatts of generation from the North
18 Brawley facility."

19 NOTIFICATION: Please pardon the interruption.
20 Your conference contains less than three participants at
21 this time. If you would like to continue press star-one.

22 HEARING OFFICER CELLI: Can I ask you, Mr.
23 Marcus, to go ahead and hang that one up. Thank you.

24 If we just cut somebody off I'm sure they'll
25 figure out how to get back to us through WebEx. Our

1 apologies.

2 I'm sorry for the interruption. Can I -- as long
3 as I have you and as long as I'm interrupting. This
4 option that was just described, is there some sort of
5 documentary evidence that supports that in the record?

6 MS. POTTENGER: Yes there is.

7 HEARING OFFICER CELLI: What exhibit number would
8 that be?

9 MS. POTTENGER: In confidential Exhibit 203 we
10 have submitted the power purchase agreement between North
11 Brawley and Southern California Edison.

12 HEARING OFFICER CELLI: Is that different than
13 the Exhibit 39 that the staff, I'm sorry, that CURE put in
14 Exhibit 39, which was the Resolution E41-26 redacted?

15 MS. POTTENGER: Yes, this is the actual power
16 purchase agreement.

17 HEARING OFFICER CELLI: Did CURE put in the power
18 purchase agreement at all?

19 MS. KLEBANER: Not, it was not attached to our
20 complaint; that information was not public information.
21 We attached a resolution approving, the CPUC resolution
22 approving the PPA.

23 HEARING OFFICER CELLI: So that's all we have
24 from CURE as to the PPA was Exhibit 39.

25 MS. KLEBANER: No, there is the resolution and

1 then there's also a statement in Exhibit 19 dated -- the
2 document is dated January 2010. It is a revised project
3 description for the East Brawley project in which
4 respondent represents the County that they can sell
5 generation from the East Brawley project pursuant to an
6 existing power purchase agreement with SCE.

7 HEARING OFFICER CELLI: Okay. And now back to
8 Ms. Pottenger. Exhibit 203 is the PPA or contains the
9 PPA?

10 MS. POTTENGER: Yes, it contains the PPA.

11 HEARING OFFICER CELLI: Is there some sort of
12 page designation or something?

13 MS. POTTENGER: Would you like me to identify the
14 page or would you like the witness to identify the page?

15 HEARING OFFICER CELLI: Actually if you could
16 just tell me where to find this.

17 MS. POTTENGER: If you go to Article 1, Section
18 1.01, Section D. It states, "Seller may, by giving notice
19 to Southern California Edison within one year of the
20 affected date, elect in its sole discretion to increase
21 the contract capacity by an additional 50 megawatts."

22 HEARING OFFICER CELLI: And the date of that
23 agreement?

24 MS. POTTENGER: June 29th, 2007.

25 HEARING OFFICER CELLI: And so, is there any

1 other evidence other than just this testimony that this
2 lapsed without being exercised?

3 MS. POTTENGER: I can follow up with a question
4 on that topic if you would like.

5 HEARING OFFICER CELLI: Okay, thank you, please
6 do. Go ahead and proceed.

7 MS. POTTENGER: Mr. Sullivan, has Ormat exercised
8 the option under the North Brawley PPA to increase sales
9 of generation to 100 megawatts?

10 MR. SULLIVAN: No.

11 MS. POTTENGER: May I continue, Hearing Officer
12 Celli?

13 HEARING OFFICER CELLI: Please. Sorry for the
14 interruption.

15 MS. POTTENGER: Mr. Sullivan, we were discussing
16 page 15 of CURE's complaint where CURE states that, quote,
17 "Ormat has separately contracted for --" this goes to the
18 question that you just asked, Hearing Officer Celli. Is
19 there an option in the North Brawley PPA for the sale of
20 generation from the East Brawley facility?

21 MR. SULLIVAN: No longer.

22 MS. POTTENGER: On page 19 of CURE's complaint,
23 CURE states that North Brawley and East Brawley are
24 "proposed on adjoining parcels of land." Is this
25 statement correct?

1 MR. SULLIVAN: No.

2 MS. POTTENGER: Can you please explain why.

3 MR. SULLIVAN: We only -- Ormat acquired the
4 land, I think approximately 24 acres for the North Brawley
5 facility. And through lease agreements we leased the
6 well-field that surrounds the facility, some 2500 acres.

7 HEARING OFFICER CELLI: Twenty-five hundred?

8 MR. SULLIVAN: Yes, 25 approximately. Not all
9 the land in the North Brawley KGRA is leasable. Many
10 farmers down there with different opinions. So there's
11 many, there's -- it's not contiguous.

12 Also there's other land. For example, we had to
13 get easements from the Imperial Irrigation District for
14 some of the pipeline runs. And there is other land I
15 think owned by the City of Brawley that are between North
16 Brawley and East Brawley.

17 MS. POTTENGER: Thank you. On page ten of CURE's
18 complaint CURE states that, quote, "Treated effluent from
19 the Brawley wastewater treatment plant would also supply
20 the North Brawley facility." End quote. Is this
21 statement correct?

22 MR. SULLIVAN: No, it's not correct.

23 MS. POTTENGER: And please repeat for the record
24 where North Brawley receives its water from.

25 MR. SULLIVAN: North Brawley receives its water

1 under a long-term contract with Imperial Irrigation
2 District for water supplied through a pipeline
3 underground, approximately three miles long, heading due
4 west to the West Side Main Canal.

5 MS. POTTENGER: On page 20 of CURE's complaint
6 CURE states that, quote, "North Brawley and East Brawley
7 will also share utility service pursuant to a water supply
8 agreement between Ormat and the City of Brawley for 100
9 percent of the daily effluent, once available, from the
10 Brawley wastewater treatment plant. Is this statement
11 correct?

12 MR. SULLIVAN: I'm sorry, the first part again?

13 MS. POTTENGER: "North Brawley and East Brawley
14 will also share utility service pursuant to a water supply
15 agreement between Ormat and the City of Brawley for 100
16 percent of the daily effluent from the Brawley wastewater
17 treatment plant."

18 MR. SULLIVAN: No it's not.

19 MS. POTTENGER: Is this statement correct?

20 MR. SULLIVAN: I'm sorry. It's not true.

21 MS. POTTENGER: Does North Brawley have a water
22 supply agreement with the City of Brawley?

23 MR. SULLIVAN: No.

24 MS. POTTENGER: Does Est Brawley have a water
25 supply agreement with the City of Brawley?

1 MR. SULLIVAN: No.

2 MS. POTTENGER: Will North Brawley and East
3 Brawley share water utility service?

4 MR. SULLIVAN: No.

5 MS. POTTENGER: On page 20 of CURE's complaint
6 CURE states that, quote, "North Brawley and East Brawley
7 power plants will be physically joined to facilitate
8 cooling water blow down delivery from the North Brawley
9 facility to the Est Brawley facility." End quote. Is
10 this statement correct?

11 MR. SULLIVAN: No.

12 MS. POTTENGER: On page 20 of CURE's complaint
13 CURE states that, quote, "Both facilities will
14 interconnect to the electrical grid through one
15 substation." End quote. Is this statement correct?

16 MR. SULLIVAN: No.

17 MS. POTTENGER: Can you please explain why?

18 MR. SULLIVAN: It is true that the system impact
19 study and the facilities agreement have one interconnect
20 point that was studied with the Imperial Irrigation
21 District. This was done as initial scoping for connecting
22 the projects, different phases of the same project, to the
23 transmission system. That there was constraints in the
24 area, significant constraints in the transmission system
25 in that area. And only one viable connection point was

1 identified and that's the 92-KV-CO line as it's called,
2 running north and south along Hovely Road, which is just
3 adjacent to the North Brawley facility.

4 The North Brawley facility has a substation that
5 connects to the 92-CO line with Imperial Irrigation
6 District and it's managed under a LGIA or a large
7 generator interconnect agreement.

8 East Brawley will have its own separate
9 substation at the East Brawley facility. We'll construct
10 a gen-tie line from that substation and connect it to the
11 interconnect point with Imperial Irrigation District,
12 which happens to be the same point that North Brawley
13 utilizes. But they're separate and distinct substations.
14 One does not rely on the other. They only share an
15 interconnect point with Imperial Irrigation District.

16 MS. POTTENGER: Thank you. On page 20 of CURE's
17 complaint CURE states that, quote, "The well fields
18 associate with each facility will be physically
19 interconnected through cables and brine and cooling water
20 pipelines spanning the New River." Is this statement
21 correct?

22 MR. SULLIVAN: No.

23 MS. POTTENGER: Thank you. Did you hear in the
24 beginning the opening statement made by CURE's counsel,
25 Ms. Klebaner, the statement that North Brawley and East

1 Brawley would share a common controller? Did you hear
2 that statement?

3 MR. SULLIVAN: I heard the statement.

4 MS. POTTENGER: Is that statement correct?

5 MR. SULLIVAN: It's not correct.

6 MS. POTTENGER: Can you please explain why.

7 MR. SULLIVAN: Each facility -- North Brawley has
8 a control room. East Brawley will have a control room
9 located physically at the location.

10 Now, the state of technology is that because
11 everything is computerized we currently -- for example,
12 Ormat, just to elucidate, we currently operate master
13 control rooms that control multiple facilities, for
14 example. In our Reno control room for our Steamboat
15 facility and geothermal facility in Reno, Nevada, we
16 operate 50 megawatts of power plants in North and South
17 Dakota and Minnesota, remotely, because of the technology.
18 We also have control rooms at those facilities in North
19 and South Dakota and Minnesota.

20 At North Brawley and East Brawley we contemplated
21 having a console that -- in each control room that could
22 see the operation of the other facility. It's not a
23 specific control room, it's only for monitoring purposes.
24 It utilizes the advantages of current technology where
25 with just a separate computer console and computer you can

1 see the other facility. Which we use for multiple
2 facilities around the US.

3 MS. POTTENGER: If the Commission were to find
4 jurisdiction over North Brawley what would that mean for
5 Ormat?

6 MR. SULLIVAN: It would be disastrous for our
7 company. We pride ourselves on our record, especially in
8 Imperial Valley. We've been there for a long time and
9 operate many power plants there and also in other places
10 in California.

11 And we permitted this based on our design of
12 49.5. We went to the jurisdiction that had authority over
13 it and legally permitted it. Operating now three years
14 later, to have some sort of ruling that it was not legally
15 permitted and would be subject to yet another process of
16 permitting. For a publicly traded company like ours, this
17 is an extreme amount of risk and uncertainty. That I have
18 a hard time understanding all the impacts but it would be
19 extremely negative. Especially when we have, we went
20 through such a long process with the jurisdiction in
21 Imperial Valley and we have done so many times. To come
22 back now and say something was done that was wrong, this
23 would be very disastrous for our company.

24 MS. POTTENGER: How much has Ormat invested in
25 North Brawley?

1 MR. SULLIVAN: We've invested nearly or
2 approximately \$300 million into this facility; \$300
3 million.

4 MS. POTTENGER: If the Commission were to find
5 jurisdiction over East Brawley and issue an injunction
6 halting the ongoing licensing of East Brawley at Imperial
7 County, what would that mean for Ormat?

8 MR. SULLIVAN: Again, this would be disastrous
9 for the East Brawley project. This is a project that we
10 began permitting in 2008, and for various constraints, are
11 still in permitting. Partially because of intervenors
12 like CURE. That's extended the permitting process now
13 over three years.

14 So we have time and money invested in a project
15 in Imperial Valley. And to have a ruling that it were
16 subject to yet another jurisdiction for a plant that's
17 clearly below 50 megawatts, is another delay on this
18 project that would be difficult for it to withstand.

19 MS. POTTENGER: In summary, Mr. Sullivan, are
20 North Brawley and East Brawley independent and separate
21 projects?

22 MR. SULLIVAN: Yes.

23 MS. POTTENGER: Are the generating capacities of
24 North Brawley and East Brawley as calculated by the
25 Commission's regulations each under 50 megawatts?

1 MR. SULLIVAN: Yes.

2 MS. POTTENGER: Are there resource constraints at
3 the North Brawley and East Brawley sites that prevent the
4 projects from generating 50 megawatts or more?

5 MR. SULLIVAN: Yes.

6 MS. POTTENGER: Thank you. We have no further
7 questions.

8 HEARING OFFICER CELLI: Thank you. Cross by
9 staff.

10 STAFF COUNSEL OGATA: Thank you, Mr. Celli. Just
11 a few questions, I believe.

12 CROSS EXAMINATION OF PANEL BY STAFF

13 BY STAFF COUNSEL OGATA:

14 Q Mr. Sullivan, since you've kind of been on a roll
15 here I'll just direct the questions to you if you don't
16 mind.

17 With respect to Ormat, are there any temporary
18 mechanical devices that you have used to restrict the
19 capacity below 50 megawatts at North Brawley?

20 A Temporary, no?

21 STAFF COUNSEL OGATA: Temporary.

22 MR. SULLIVAN: No.

23 STAFF COUNSEL OGATA: So it's your testimony that
24 the net design of 49.5 is what you aimed for and that at
25 this point in time, because of resource constraints, you

1 are not even able to produce at that level, is that,, is
2 that correct?

3 MR. SULLIVAN: Yes it's design point. We aim for
4 that. In the context of the other constraints it's a
5 maximum. But we cannot achieve that because of resource
6 constraints.

7 STAFF COUNSEL OGATA: You spoke of a single
8 control room. Is Ormat intending to operate the North
9 Brawley and East Brawley power plants ion a coordinated
10 fashion in any way?

11 MR. SULLIVAN: No, I spoke of two control rooms.
12 There's a control room at both facilities. And simply for
13 purposes of increased monitoring there would be a console
14 at the North Brawley facility for the East Brawley
15 facility. And for that matter, eventually we could have a
16 console at the Heber facility, which is also a power plant
17 in Imperial Valley. In fact, that's what we'd prefer if
18 we get to that point.

19 STAFF COUNSEL OGATA: Okay, so let me just be
20 clear about that. And so you say you're going to have a
21 control room for monitoring. Does that mean you will not
22 be able to control the facilities, only to monitor the
23 operations of that other facility?

24 MR. SULLIVAN: Procedurally, yes.

25 STAFF COUNSEL OGATA: Let's see. Mr. Buchanan,

1 you said something that just confused me a little bit, I
2 just want to be clear.

3 The East Brawley facility is being designed for
4 49.5, is that correct?

5 MR. BUCHANAN: Correct.

6 STAFF COUNSEL OGATA: Okay. You said something
7 about the fact that it will be 30 megawatts instead of
8 49.5. Can you clarify that for me, please.

9 MR. BUCHANAN: Based on the knowledge that we've
10 gained about the resource and those resource constraints,
11 the conceptual design is being changed to a 30 megawatt
12 net facility. So the original design was for 49.5
13 megawatts net. Today based on the information that we
14 have on the resource, the conceptual design is being
15 changed to 30 megawatts.

16 STAFF COUNSEL OGATA: So then are you saying then
17 that when this facility is built and operated it will not
18 be able to operate in excess of 30 megawatts?

19 MR. BUCHANAN: Correct.

20 STAFF COUNSEL OGATA: Thank you. No further
21 questions.

22 HEARING OFFICER CELLI: Thank you, Mr. Ogata.
23 Mr. Wilkins, please.

24 MR. WILKINS: The County of Imperial has no
25 questions for these witnesses.

1 HEARING OFFICER CELLI: Thank you. Cross by
2 CURE. Cross-examination with CURE?

3 MS. KLEBANER: Small clarification. Will
4 Charlene Wardlow be testifying? Should we wait for that?

5 HEARING OFFICER CELLI: Good question.
6 Apparently not. If you end the questioning now and they
7 don't redirect then we haven't heard and won't be hearing
8 from Ms. Wardlow. However, maybe they forgot, I don't
9 know.

10 MS. POTTENGER: Ms. Wardlow is also available to
11 testify to the air permit conditions, so she's available.
12 And we also have her, we identified her as a potential
13 witness in case rebuttal testimony was necessary regarding
14 the permitting activities for North Brawley and East
15 Brawley.

16 HEARING OFFICER CELLI: Thank you. But you can,
17 if you want to ask her questions, feel free.

18 MS. KLEBANER: Okay, will do.

19 CROSS EXAMINATION BY CURE

20 BY MS. KLEBANER:

21 Q I have a question for Mr. Buchanan.

22 Actually, I'm sorry, this is a question for Mr.
23 Sullivan. I apologize.

24 Exhibit 34, Attachment 1. That the East Brawley
25 facility has 17 production wells.

1 MS. POTTENGER: I'm sorry, can you please
2 identify what Exhibit 34 is.

3 MS. KLEBANER: Sure.

4 HEARING OFFICER CELLI: It says it's a letter
5 from Ron Leiken to Brad Juarez dated September 14, 2010.

6 MS. KLEBANER: Thank you.

7 MS. POTTENGER: Is there a copy for the witness
8 to examine?

9 MS. KLEBANER: I'll give you mine.

10 HEARING OFFICER CELLI: Was this the application
11 for the East Brawley conditional use permit?

12 MS. KLEBANER: This is a revised application for
13 the authority to construct for the East Brawley Geothermal
14 Development Project.

15 HEARING OFFICER CELLI: Okay.

16 MS. KLEBANER: Which also contains a description
17 of the facility.

18 Let me just have a second to ramp up the
19 electronic version on my computer.

20 HEARING OFFICER CELLI: Do you have a page so
21 that he can kind of quickly get to what it is you're going
22 to be asking about?

23 MS. KLEBANER: Yeah, it's his page 24. That's
24 what I'm verifying right now.

25 HEARING OFFICER CELLI: This is the kind of dead

1 air that starts getting my blood pressure up.

2 MS. KLEBANER: Sorry, I'll try to be quick about
3 it. I wasn't expecting to give up my copy of the exhibit.

4 HEARING OFFICER CELLI: Thank you.

5 MS. KLEBANER: On page 24 of Exhibit 34 it states
6 that East Brawley has 17 production wells. What is the
7 average production capacity for each well?

8 MR. SULLIVAN: Page 24. Page 24, what paragraph,
9 I'm sorry? You said, page 24?

10 MS. KLEBANER: Yes. Let me -- I'm still working
11 on pulling up the electronic version.

12 HEARING OFFICER CELLI: Do you have a question?

13 MS. KLEBANER: Let me, let me rephrase the
14 question.

15 For the East Brawley project what is the average
16 production capacity for each well? Leaving aside the
17 exhibit that I provided.

18 MR. SULLIVAN: For the design point I have to
19 defer to Tom Buchanan.

20 MS. POTTENGER: If you know.

21 MR. BUCHANAN: I don't know what the capacity of
22 each well was. I do know from the heat and mass balance
23 what the original conceptual flow from the, from the
24 entire well field was. But until the wells are drilled
25 it's not possible to answer this.

1 MS. KLEBANER: Sorry. Another question for you,
2 Mr. Buchanan, as well as Mr. Sullivan. For the East
3 Brawley -- for the East Brawley facility did you provide
4 staff or CURE with the heat and mass balance calculations
5 which assume three OECs for that project?

6 MR. SULLIVAN: There is a HMB for three OECs.

7 MS. KLEBANER: There is a, I'm sorry, what?

8 MR. SULLIVAN: Heat and mass balance, sorry.
9 Heat and mass balance. I'm not sure if it was submitted.

10 MR. BUCHANAN: I don't believe it was submitted.

11 MS. KLEBANER: Thank you. In responses to CURE's
12 data requests respondent provided that the average, that
13 the operational water demand for the East Brawley project
14 is 5,500 acre/ feet. That assumes five OECs. What is the
15 necessary amount of water for three OECs for the East
16 Brawley facility?

17 MR. SULLIVAN: It'll be less than 5500. Now I'm
18 not trying to be facetious but without the heat and mass
19 balance in front of me -- it would be less.

20 MS. KLEBANER: Do you know whether the documents
21 that have been provided to staff and to CURE identify the
22 amount of water necessary to operate per year, to operate
23 three OECs?

24 MR. SULLIVAN: I'm sorry, to staff?

25 MS. KLEBANER: I apologize. To California Energy

1 Commission staff or to CURE.

2 MR. SULLIVAN: Again, I'm a little confused. Did
3 I submit such a document or does one exist?

4 MS. KLEBANER: Are you aware if a document
5 showing the amount of water necessary to operate three
6 OECs has been submitted to staff or to CURE?

7 MR. SULLIVAN: I don't know.

8 MS. KLEBANER: It's a yes or no question.

9 MR. SULLIVAN: I do not know.

10 MS. KLEBANER: You provided in your testimony
11 that piping limits provide a constraint on generation
12 capacity.

13 MR. SULLIVAN: That's correct.

14 MS. KLEBANER: And that the facility was created
15 to generate 49.9 megawatts net. That was your testimony?

16 MR. SULLIVAN: Our design point is 49.5 and
17 piping limitations are a consideration.

18 MS. KLEBANER: Is that design point contained in
19 a permit application for the North Valley project?

20 MR. SULLIVAN: I believe the permit applications
21 reference 49.9.

22 MS. KLEBANER: What is the piping limit as a
23 percentage of the design flow?

24 MR. SULLIVAN: Piping limit as a percentage of
25 design flow? I don't understand what piping -- piping

1 limit. What does that mean?

2 MS. KLEBANER: What percentage of the design flow
3 out of the pipe is capable of handling?

4 MR. SULLIVAN: I'm sorry, you broke up at the
5 very beginning, i apologize.

6 MS. KLEBANER: Let me restate the question. What
7 percentage of the design flow are the pipes capable of
8 handling?

9 MR. SULLIVAN: The pipes are designed for 100
10 percent of the design flow.

11 MS. KLEBANER: Is that the maximum they're
12 capable of handling?

13 MR. SULLIVAN: The maximum, again, for the design
14 of the facility, which is context of multiple constraints,
15 it was designed at 49.5. And there is no -- and we look
16 at it, Ormat from the engineering standpoint, as a
17 maximum.

18 When we exceed that maximum at design point,
19 especially for the piping systems and other systems,
20 there's negative consequences. So there may be margin but
21 that margin is a margin we cannot use. It's margin from a
22 safety consideration for a typical, prudent engineering
23 design.

24 To exceed, to go into your margins is not prudent
25 nor is it standard utility practice, which is referenced

1 in multiple agreements we have and it's a standard we
2 adhere to.

3 MS. KLEBANER: What is the risk margin?

4 MR. SULLIVAN: And specifically --

5 MS. KLEBANER: Can you --

6 MR. SULLIVAN: Excuse me?

7 MS. KLEBANER: I apologize, go on.

8 MR. SULLIVAN: And specifically for piping it's,
9 it's extremely unsafe. In the context of Brawley
10 particularly because of the high salts content that we
11 talked about and the corrosive nature of the fluid. The
12 piping velocities are extremely critical to the safe
13 operation of the facility. And this is margin that we
14 cannot use.

15 MS. KLEBANER: Do you have a number in mind when
16 you say "the margin?" What is the margin?

17 MR. SULLIVAN: I just reference the discussion
18 the previous witnesses talked about. I think one of the
19 witnesses said, if you have a 250 horsepower load you can
20 put a 325 horsepower motor on it. They said this is
21 typical. It still operates at 200 horsepower. And as you
22 exceed the 200 horsepower into the motor you're dealing,
23 you're moving into what we call the service factor.

24 MS. KLEBANER: Could I direct you back to the
25 original question --

1 MR. SULLIVAN: Which reduces --

2 MS. KLEBANER: -- which pertained to pipes.

3 MS. POTTENGER: Hearing Officer Celli, point of
4 order, please.

5 PRESIDING MEMBER DOUGLAS: Let him answer the
6 question, please.

7 MS. POTTENGER: Thank you.

8 MR. SULLIVAN: So moving -- as other witnesses
9 testified, moving into service factors, for example,
10 specific a term that we use for electrical motors. It
11 shortens the life of the motor and it's not considered
12 prudent. And this is similar engineering that we utilize
13 for different components. Piping is especially,
14 especially critical, again, in a geothermal facility, that
15 your witnesses didn't have any experience in.

16 MS. KLEBANER: Can you please state what your
17 margin is with respect to pipes, what your engineering
18 risk margin is?

19 MR. SULLIVAN: Well, we do have margin. We
20 typically, for example, design for a corrosion allowance,
21 okay. So we'll estimate corrosion rates in mils per year.
22 And then we'll add metal, actually, when we purchase the
23 pipe. When we purchase the pipe we'll purchase metal that
24 is thicker than is required for simple pressure strength
25 calculations.

1 So at the end of 30 years, the expected lifetime
2 of the facility, it can corrode away and still have, have
3 the proper strength to withstand the pressure of the
4 fluid. This is one example.

5 MS. KLEBANER: Ask the question again. Do you
6 have a specific number in mind when you say "a margin of
7 error?"

8 MR. SULLIVAN: For corrosion it's, I think it's
9 five mils for North Brawley, five-thousandths of an inch.

10 MS. KLEBANER: And what percent of a design flow
11 can that handle?

12 MR. SULLIVAN: Well, if you exceed design flow
13 then you'll shorten the lifetime of your, your life
14 expectancy of the piping system and be subject to failure
15 within the life design, the design life of the facility.

16 MS. KLEBANER: Assuming the margin of error that
17 you provided, what is the impact on the flow?

18 MR. SULLIVAN: Well, we design -- I'm sorry,
19 repeat that again.

20 MS. KLEBANER: Assuming the margin of error, the
21 number that you provided, what is the impact on the flow,
22 on the design flow, as percentage of the design flow?

23 MR. SULLIVAN: I didn't discuss margin of error,
24 I don't understand the question.

25 MS. KLEBANER: Okay, let me try a different

1 question.

2 In your testimony you stated the OEC was
3 optimized since the respondent constructed the North
4 Brawley facility. Does that mean that the OECs for the
5 East Brawley facility are more efficient than at the North
6 Brawley facility's?

7 MR. SULLIVAN: The East Brawley facility would be
8 designed based on the ultimate field development. Now,
9 depending on that field, the resource, which is the driver
10 in a geothermal facility and you can't separate the two,
11 I'm sorry. Ignoring the resource when it comes to -- a
12 geothermal resource when it comes to a geothermal power
13 plant, makes no sense. And the facility, East Brawley,
14 will be optimized based on the East Brawley geothermal
15 resource.

16 Now, based on that resource it could be by
17 thermodynamic principle, less efficient. If, for example,
18 the geothermal resource is five degrees cooler. If it's
19 five degrees cooler ultimately the heat rate will be less.
20 The heat rate is the amount of BTUs required to get a
21 kilowatt of electricity. So theoretically the East
22 Brawley facility could be less efficient.

23 It's really driven by the resource
24 characteristics and the design criteria you have to use to
25 safely design and operate a power plant for 30 years.

1 Some of these things, which I discussed earlier, including
2 the erosive nature of the fluid, the chemical
3 characteristics, the aggressiveness of the chemical.

4 MS. KLEBANER: Does Ormat design OECs?

5 MR. SULLIVAN: Yes we do.

6 MS. KLEBANER: Do you try to design them to be
7 more efficient, as efficient as possible?

8 MR. SULLIVAN: No. What we design -- as
9 efficient as possible, that is true.

10 MS. KLEBANER: Thank you.

11 MR. SULLIVAN: The optimizer for the resource.

12 MS. KLEBANER: Thank you. That's it, thank you.
13 That's it for Mr. Buchanan and Mr. Sullivan but I do have
14 questions for Ms. Wardlow.

15 Exhibit 200, which is respondent's answer to
16 CURE's complaint, in Appendix B at page four includes the
17 permit application for the East Brawley facility. And
18 that application states that the project will be designed
19 to have six OECs. Is that your understanding?

20 MS. WARDLOW: Yes.

21 MS. KLEBANER: Has respondent submitted a revised
22 project description to the county for less than six OECs?

23 MS. WARDLOW: No, because as discussed for North
24 Brawley, we permitted it based on what we thought we might
25 need so that we had flexibility as we learned about the

1 resource and completed the design of the project.

2 MS. KLEBANER: Thank you.

3 MS. POTTENGER: Did you have something to add,
4 Ms. Wardlow?

5 MS. KLEBANER: This is my cross-examination.

6 HEARING OFFICER CELLI: Well, you know what, if
7 she's got an answer, let her finish. If there was more,
8 go ahead.

9 MS. WARDLOW: (Shook head.)

10 HEARING OFFICER CELLI: The record should reflect
11 Ms. Wardlow is shaking her head, no.

12 MS. POTTENGER: Thank you.

13 HEARING OFFICER CELLI: Continue on with your
14 cross, please.

15 MS. KLEBANER: In respondent's Exhibit 200 at
16 Appendix G -- D, respondent provides the permit for the
17 North Brawley facility, which describes the facility as
18 having six OECs. Is that your understanding of the permit
19 for the North Brawley facility?

20 MS. WARDLOW: The project conditional use permit
21 was originally submitted with six OECs based on needing
22 flexibility until we understood the complete resource and
23 knew exactly what the design of each OEC was going to
24 be --

25 MS. KLEBANER: Thank you.

1 MS. WARDLOW: -- as discussed.

2 MS. KLEBANER: Thank you. Has respondent
3 submitted a revised project, a revised conditional use
4 permit for the North Brawley facility?

5 MS. WARDLOW: No. the conditional use permit
6 limits the project to 49.9 net megawatts and says up to
7 six OECs.

8 MS. KLEBANER: Thank you. No further questions.

9 HEARING OFFICER CELLI: Thank you. Before you
10 ask any redirect, if you have any, the Committee has a few
11 questions so if you'll just give us a moment. I am going
12 to ask these questions, Mr. Sullivan, Mr. Buchanan and Ms.
13 Wardlow, to the whole panel. Whoever can best answer it,
14 just let us -- answer the question.

15 The first question is, did Ormat inquire at the
16 time that it applied for the permit, was there ever an
17 inquiry to the Energy Commission regarding jurisdiction
18 made by Ormat to the Energy Commission? Any of you, if
19 you know.

20 MS. WARDLOW: Not that I'm aware of.

21 I might state that there was an inquiry, actually
22 by the Energy Commission though. I believe actually by
23 Ms. Allen about maybe two years ago requesting information
24 on the East Brawley project.

25 HEARING OFFICER CELLI: Okay. You received an

1 inquiry from the Energy Commission about East Brawley?

2 MS. WARDLOW: Correct.

3 HEARING OFFICER CELLI: You didn't inquire to the
4 Energy Commission about East Brawley?

5 MS. WARDLOW: Correct.

6 HEARING OFFICER CELLI: Okay, thank you. Did you
7 ever get a response?

8 MS. WARDLOW: No.

9 HEARING OFFICER CELLI: No?

10 PRESIDING MEMBER DOUGLAS: I'm sorry, let me just
11 make sure I understand that. So you received an inquiry.
12 And did you respond to the inquiry?

13 MS. WARDLOW: Yes. I mean, if you'd like I can
14 look up the specific dates on my computer, I don't
15 remember at this point. I'm kind of losing track of time.

16 PRESIDING MEMBER DOUGLAS: So you received an
17 inquiry and the Energy Commission wanted certain
18 information. And did you provide whatever information the
19 Energy Commission asked for?

20 MS. WARDLOW: Yes we did.

21 PRESIDING MEMBER DOUGLAS: Okay.

22 HEARING OFFICER CELLI: And then Mr. Sullivan, I
23 believe it was, you testified about the console and the
24 ability to control remotely through computers these other
25 projects offsite. Does the console that you had

1 envisioned at North Brawley, would it be able to turn on
2 or turn off the East Brawley power plant?

3 MR. SULLIVAN: No.

4 HEARING OFFICER CELLI: What would it be able to
5 do?

6 MR. SULLIVAN: You would monitor the, you could
7 monitor the facility. Specifically what we're looking for
8 is if alarms came in, that more people would be available
9 to see the alarm and alert somebody that there's something
10 that's out of the, out of the ordinary.

11 HEARING OFFICER CELLI: So it has the ability to
12 alert you remotely that there are alarms going off in any
13 place within East Brawley.

14 MR. SULLIVAN: That's correct, it does.

15 HEARING OFFICER CELLI: Okay. Anything else?

16 MR. SULLIVAN: Yes. You could see, it's
17 envisioned that you would see its typical operating
18 displays. So you could look at it and you could see, for
19 example, how many production pumps are online, how much
20 power you're making, these type of things. It's typical
21 monitoring.

22 For example, in this consideration, because we
23 operate in the Imperial Irrigation District and we get
24 dispatched and get asked questions and equipment fails
25 often, both for Imperial Irrigation District and

1 ourselves, that having another person -- for example --
2 frankly, for little things like a guy goes to the bathroom
3 and the Imperial Irrigation District has to get a hold of
4 you, there's a backup. So he can report to the Imperial
5 Irrigation District that we're generating, that we're
6 online and we're generating. We're at X amount of
7 megawatts. These type of silly things that come up that
8 are a big impact in the operation when humans are
9 involved, frankly.

10 HEARING OFFICER CELLI: So would there be any
11 capacity to respond to any of these alarms, say by
12 shutting something off --

13 MR. SULLIVAN: No.

14 HEARING OFFICER CELLI: -- from the remote
15 location?

16 MR. SULLIVAN: No.

17 HEARING OFFICER CELLI: Okay. In response to
18 cross-examination by CURE you mentioned that there was a
19 second phased approach that would have been the East
20 Brawley project. And that was in the context, I believe,
21 of the power purchase agreement. You were talking about a
22 second phased approach that would have been East Brawley.
23 Or it could have been in the context of the system impact
24 study.

25 MR. SULLIVAN: Yeah. Both the system impact

1 study contemplated a phased expansion. In fact the
2 current plan, which has been communicated to Imperial
3 Irrigation District, is three phases. A much smaller
4 second phase.

5 And also with the power purchase agreement we
6 had, which is typical of power purchase agreements, an
7 option to expand. And it wasn't specific as to where,
8 other than typically in a power purchase agreement in this
9 particular agreement you have to designate certain lands
10 to it.

11 So theoretically we could have expanded the
12 footprint of production and expanded on that power
13 purchase agreement. Frankly, I don't know how we could
14 have done it but someone thought it was a great idea at
15 the time to have that option.

16 HEARING OFFICER CELLI: So at the time when you
17 executed the power purchase agreement Ormat contemplated
18 an expansion of up to 100 megawatts from this geothermal
19 area.

20 MR. SULLIVAN: Yes. From the North Brawley KGRA.
21 And it was probably also contemplated by Southern
22 California Edison. Who was driving that discussion, I'm
23 not sure.

24 HEARING OFFICER CELLI: And that, again just for
25 my clarification. That was in the context of the system

1 impact study. Or was that in the context of the power
2 purchase agreement?

3 MR. SULLIVAN: This is a separate, distinct --
4 separately and distinct; there are two separate things.
5 The power purchase agreement contemplated expansion. The
6 system impact study contemplated a phased, a second phase
7 that ultimately would inject 50 more megawatts into the
8 system.

9 HEARING OFFICER CELLI: Okay.

10 MR. SULLIVAN: Which is important. To expand --
11 you can see the disconnect now. To expand the PPA we
12 would have had to export another 50 megawatts out of the
13 system. We could not do that by the system impact study
14 because the system impact study only contemplated 50
15 megawatts. So the system -- another 50 megawatts staying
16 in the system, in the Imperial Irrigation system.

17 HEARING OFFICER CELLI: So when was the PPA
18 executed between Southern California Edison and Ormat?

19 MR. SULLIVAN: June of 2007.

20 HEARING OFFICER CELLI: So anyway, as late as
21 June 2007 you were contemplating the possibility of up to
22 100 megawatts from this general geothermal area.

23 MR. SULLIVAN: We had the option in the PPA, yes.

24 HEARING OFFICER CELLI: Okay, those are all of
25 the questions from the dais. Anything on redirect from

1 the respondent Ormat?

2 MS. POTTENGER: No, no redirect.

3 HEARING OFFICER CELLI: Thank you. Then this
4 panel is excused. Thank you for coming down and
5 testifying and for your patience today.

6 With that there should be a motion from
7 respondent with regard to -- have I received all your, I
8 don't think I received your exhibits yet. That's right, I
9 received them all. I moved them all and then you were
10 going to take another look at whether you wanted to admit
11 other documents.

12 I don't know that we have to handle that now
13 because we are going to go around and finish off some more
14 witnesses and then -- don't let me forget before we close
15 whether you wanted to add any other exhibits, please.

16 I guess we'll call staff next, staff's panel.
17 Staff, you have submitted written testimony so I guess
18 this would be -- go ahead, Mr. Wilkins.

19 MR. WILKINS: I wonder if it might be possible to
20 take the County out of order here? Just a question, I'll
21 understand if we can't. Mr. Cabanilla had other
22 obligations. If we could check with him on the line. I
23 know, staff, unfortunately has to be here the whole time.
24 If it's possible? If not he has indicated he is willing
25 to stay also though.

1 HEARING OFFICER CELLI: So your witnesses are Mr.
2 Cabanilla and Mr. Minnick?

3 MR. WILKINS: That is correct.

4 HEARING OFFICER CELLI: Okay, I have just unmuted
5 both of them. Mr. Cabanilla?

6 MR. CABANILLA: Cabanilla, yes I'm here.

7 HEARING OFFICER CELLI: Okay. We have just
8 inquired from staff, who nodded in the affirmative, that
9 it was okay with them that we take County of Imperial out
10 of order. So Mr. Minnick are you ready to testify?

11 MR. MINNICK: Sure.

12 HEARING OFFICER CELLI: If that's acceptable to
13 all of the parties then we'll take County of Imperial out
14 of order. Mr. Petty, I need you to administer the oath to
15 Mr. Minnick and to Mr. Cabanilla.

16 Whereupon,

17 RICHARD CABANILLA

18 JIM MINNICK

19 were duly sworn and testified as follows:

20 THE REPORTER: Could you please individually
21 state and spell your names for the record.

22 MR. MINNICK: Jim Minnick, M-I-N-N-I-C-K.

23 MR. CABANILLA: Richard Cabanilla,
24 C-A-B-A-N-I-L-L-A.

25 HEARING OFFICER CELLI: Thank you. Please

1 proceed, Mr. Wilkins.

2 DIRECT EXAMINATION OF IMPERIAL COUNTY PANEL

3 BY MR. WILKINS:

4 Q Mr. Cabanilla and Mr. Minnick, just so you know,
5 your résumés have been admitted by stipulation into the
6 record so I will not be questioning you about them.

7 I would ask, as we discussed, for you both to
8 separately, briefly describe who you work for now, how
9 long you have been there, and then we will get to panel
10 questions. But if you could briefly describe how long
11 you've been with the County and what your position is for
12 the Commissioners I would appreciate that.

13 MR. MINNICK: This is Jim. I have been with the
14 County for 14 years; started in 1997. I am currently the
15 Assistant Director for the Imperial County Planning and
16 Development Services Department.

17 MR. CABANILLA: Yes, I am Richard Cabanilla, I
18 work for the Imperial County Planning and Development
19 Services. Been working for the Planning Department 27
20 years. My current position is a Planner IV. And you can
21 see from my résumé that I have experience in the
22 geothermal field.

23 MR. WILKINS: If you could both answer the
24 question. Have you both been involved in permitting
25 energy projects for the County?

1 MR. MINNICK: Yes.

2 MR. CABANILLA: Yes.

3 MR. WILKINS: Is the court reporter able to
4 discern both? Thank you.

5 If you could briefly introduce yourself and
6 explain to the Commission your involvement in permitting
7 projects within the County. And make this very brief if
8 you could, in less than one minute.

9 HEARING OFFICER CELLI: You know, I wonder, that
10 would go to their qualifications. And since we have a
11 stipulation that they're experts, if we can just get right
12 into the heart of the matter.

13 MR. WILKINS: Absolutely. We'll move to the
14 panel portion of the discussion then. If one of you could
15 please briefly describe how long the County of Imperial
16 has been involved in reviewing and processing geothermal
17 exploratory and production projects.

18 MR. CABANILLA: Yeah, I'll go ahead and explain a
19 little bit of the background. The County has been
20 involved with processing geothermal projects since at
21 least May of 1971 when the initial Terms, Conditions and
22 Standards and Application Procedures for Initial
23 Geothermal Development was prepared and adopted by the
24 Board of Supervisors.

25 This document was superseded by the 1977

1 Geothermal Element, which discussed the potential of 4500
2 megawatts of geothermal development in Imperial County.

3 The preparation of the County's geothermal
4 element preceded the 1978 Public Resources Code section
5 25133, which defined what a geothermal element should
6 consist of as an option element to the County's General
7 Plan. State guidelines indicated that the guidelines for
8 developing optional element as being advisory.

9 MR. WILKINS: Thank you.

10 MR. CABANILLA: The --

11 MR. WILKINS: We can probably skip the rest of
12 that testimony.

13 HEARING OFFICER CELLI: And while we're at it,
14 just to be absolutely kosher here. Do we have a
15 stipulation from CURE that these witnesses are experts?

16 MS. KLEBANER: CURE will stipulate that these
17 witnesses are expert in their identified topics.

18 HEARING OFFICER CELLI: Thank you. And Ormat?

19 MS. POTTENGER: Yes, Ormat will stipulate.

20 HEARING OFFICER CELLI: Thank you. And staff?

21 STAFF COUNSEL OGATA: Staff stipulates.

22 HEARING OFFICER CELLI: Okay. I just wanted to
23 be clear on that, go ahead.

24 MR. WILKINS: I'm going to skip ahead, gentlemen,
25 because we are trying to work with time here, and ask you

1 if you're aware. Has the County conducted environmental
2 review with geothermal development on a countywide basis?

3 MR. CABANILLA: Yes. Once again, the County has
4 prepared four Master Environmental Impact Reports for the
5 Salton Sea, North Brawley, South Brawley and Heber areas.
6 These four Master EIRs look at the development in a
7 programmatic manner at approximately 3,445 megawatts for
8 these four areas.

9 Specifically in the North Brawley area they had a
10 Master EIR in 1979 which looked at 800 megawatts, with the
11 development of approximately 12 power plants. And the
12 power plants were listed at 5, 50 and 100 megawatt
13 increments. So the existing North Brawley power plant is
14 identified on Figure I-15, I-15 of the Master EIR, as
15 being exactly where it is currently located, which is west
16 of the 10 megawatt Southern California Edison power plant.

17 Also that same figure, the full field
18 development, identifies four power plants on the east side
19 of the New River. So the County has prepared this
20 programmatic Master EIR to identify power plants in the
21 North Brawley area.

22 MR. WILKINS: And has the CEC been involved in
23 this process?

24 MR. CABANILLA: Yes.

25 MR. WILKINS: Can you describe their involvement?

1 MR. CABANILLA: Well, particularly in 1984-85 the
2 CEC funded the revision to the 1977 Geothermal Element;
3 and since that time the County's element has been revised
4 five times with CEC staff involved. And we are currently
5 in the process of revising it for the sixth time.

6 MR. WILKINS: And has that geothermal element
7 been challenged by anyone, including the state?

8 MR. CABANILLA: No. Since 1971 when the original
9 terms were adopted by the County, we have reviewed and
10 permitted approximately 700 megawatts in the Salton Sea,
11 Heber and East Mesa areas in conjunction with BLM staff
12 and we have never been legally challenged.

13 MR. WILKINS: Turning to the North Brawley
14 project. Did the County as part of its permitting
15 determine whether the North Brawley project would generate
16 50 megawatts or less of net generating capacity?

17 MR. MINNICK: That is correct.

18 MR. WILKINS: Was that Richard or Jim who
19 testified?

20 MR. MINNICK: The application for the project was
21 to be a net 49.9.

22 HEARING OFFICER CELLI: That was Jim Minnick.
23 And I'm going to ask you gentlemen, now from here on out
24 when you answer a question to state your name first so the
25 court reporter knows which of you is testifying.

1 MR. MINNICK: Understood.

2 MR. WILKINS: And does the County have any method
3 to ensure the project does not generate more than the 50
4 megawatts that's permitted?

5 MR. MINNICK: This is Jim again. Yes. When --
6 the County requires a conditional use permit on all
7 geothermal --

8 (Mr. Minnick could not be heard.)

9 HEARING OFFICER CELLI: The record reflect that
10 Mr. Minnick is talking. Whoa, one moment.

11 Okay, I just want to see. No, the podium is not
12 being picked up so no one can hear this. Yet. This is
13 really not good. Please stand by.

14 (Notification tones.)

15 HEARING OFFICER CELLI: There we go. Is that
16 working now? No it's not.

17 (WebEx reconnected.)

18 HEARING OFFICER CELLI: All right, everybody.
19 I'm sorry but WebEx just had a hiccup. We're back. Mr.
20 Minnick and Mr. Cabanilla, you're still under oath. Mr.
21 Minnick, you were in the middle of your statement and got
22 cut off at the beginning. You were talking about what's
23 required for a conditional use permit. So maybe if you
24 could ask the question again, Mr. Wilkins.

25 MR. WILKINS: I believe you just testified and we

1 heard you say that there was a conditional use permit term
2 included with the North Brawley project. If you could
3 describe what is included in that term and how the County
4 enforces the 50 megawatt limit.

5 MR. MINNICK: Under S-1-A, under the existing
6 conditional use permit for North Brawley it states that
7 the North Brawley Geothermal is a 49.9 megawatt net binary
8 plant. So we have conditioned the project to that level.

9 And then under G-12, which is our general
10 conditions, reports and information. At our discretion we
11 can require the applicant to provide us with information
12 to verify that at any given time that they are not
13 exceeding that.

14 MR. WILKINS: And are you aware whether the
15 conditional use permit at issue here is part of the
16 record?

17 MR. MINNICK: Yes.

18 MR. WILKINS: Can you identify the exhibit
19 number?

20 MR. MINNICK: I do not have that with me.

21 MR. WILKINS: I can probably help you. It's
22 Exhibit 200, Appendix D, page four.

23 MR. MINNICK: Thank you.

24 MR. WILKINS: Do you have any knowledge whether a
25 similar condition of approval will be required for the

1 East Brawley project? Assuming it is permitted.

2 MR. MINNICK: Yes, we would require it.

3 MR. WILKINS: Turning to East Brawley. Would one
4 of you please briefly describe the environmental review
5 process for the East Brawley project to date. And we have
6 had testimony on this so I'll ask that you be very brief
7 and add anything that you believe is unique to the
8 County's perspective on this point.

9 MR. MINNICK: Okay, this is Jim again. The
10 project was submitted to the County in August of '08. In
11 December of '09 it went before the County's Imperial
12 County Environmental Evaluation Committee where it
13 received an Environmental Impact Report requirement. The
14 NOP, the Notice of Preparation, was prepared and issued on
15 June 11th, 2010 and the Draft Environmental Document went
16 to the State Clearinghouse on May 3rd, 2011.

17 MR. WILKINS: And has CURE participated in the
18 environmental review process for the East Brawley project?

19 MS. KLEBANER: Objection, relevance.

20 HEARING OFFICER CELLI: What's the relevance?

21 MR. WILKINS: The relevance is that CURE has been
22 knowledgeable about this process for over two years now.
23 And there is a motion, I don't know if the motion is still
24 pending, as to whether they are barred by laches from
25 complaining here. I believe that --

1 HEARING OFFICER CELLI: Actually the laches was
2 part of the answer, I believe, not part of the motion.

3 MS. POTTENGER: Part of the motion to dismiss.

4 MS. KLEBANER: I would also make the comment that
5 the witness did not testify to when CURE found out about
6 the process.

7 HEARING OFFICER CELLI: But I'm not even sure
8 it's -- I don't -- so CURE -- the relevance is? I mean,
9 there's -- I'm not even sure that a defense of laches is
10 availing under these circumstances. I mean that would put
11 on the public a duty to snap to it and bring a complaint
12 and to be monitoring things quickly or lose their ability
13 because they sat on their rights. And I'm not sure that's
14 contemplated here. So what -- We haven't ruled on the
15 laches. I'm just trying some ideas out, ladies and
16 gentlemen. But I want to say that I don't believe that
17 CURE's knowledge of East Brawley and North Brawley is
18 relevant as to whether we have jurisdiction or not. And
19 so --

20 MR. ELLISON: Mr. Celli, can I make one quick
21 comment?

22 HEARING OFFICER CELLI: Please.

23 MR. ELLISON: I'm not going to respond to your
24 comment about laches in the interest of time but I will
25 suffice it to say, we do have a different view on that. I

1 would ask that this evidence be taken because it is going
2 to be very short and then you can decide later on the
3 relevance of it based upon arguments as to laches.

4 HEARING OFFICER CELLI: Well --

5 MS. KLEBANER: We object. The evidence is either
6 relevant or it's not. If the intervenor believes the
7 evidence is relevant we would like to hear why.

8 HEARING OFFICER CELLI: Well, it's relevant now
9 because there was a defense of laches raised --

10 MR. ELLISON: Well let me also --

11 HEARING OFFICER CELLI: -- so it's in the record.
12 Let me just finish and say the laches is in the record.
13 So I think in the interest of time let's get them to say
14 when they think they know that CURE came in and we'll give
15 it the weight it deserves.

16 MR. ELLISON: Mr. Celli, let me add one sentence.

17 HEARING OFFICER CELLI: Yes.

18 MR. ELLISON: It is also relevant to the weight
19 that you give witness' testimony in terms of how -- there
20 has been a lot of discussion by CURE about how little time
21 they have had to prepare.

22 HEARING OFFICER CELLI: No, that's not relevant
23 actually. Their inability to prepare isn't part of the
24 record that we would consider. It has nothing to do with
25 whether we have jurisdiction or not. I mean, the record

1 is going to be what the record is going to be. Whether
2 CURE has had time to prepare or not. I mean, we're all in
3 the same boat. Everybody's got the same amount of notice,
4 pretty much. And so -- Let's go on. I'm going to
5 overrule the objection. Basically, just if you can get
6 the information out in one sentence.

7 MR. WILKINS: If you could briefly describe how
8 long CURE has been involved in the environmental review
9 process for the East Brawley project, please.

10 MR. MINNICK: This is Jim again. Our first
11 contact with CURE regarding this project was in August of
12 2009. We also received a comment letter from CURE during
13 the Draft Environmental EIR circulation consisting of a
14 303 page comment letter.

15 HEARING OFFICER CELLI: On what date?

16 MR. MINNICK: On what date? I don't have that in
17 front of me, it was during the circulation.

18 HEARING OFFICER CELLI: Okay. Let's move on to
19 something else.

20 MR. WILKINS: Can you please describe the current
21 status of the environmental review for the East Brawley
22 project.

23 MR. MINNICK: The County is currently reviewing
24 the comments received and preparing the Final EIR.

25 MR. WILKINS: And as part of those responses to

1 comments has the Department reviewed the aggregation issue
2 that is before the Commission today?

3 MR. MINNICK: There have been comments and the
4 comments, we are in the process of reviewing that, yes.

5 MR. WILKINS: And has the Department reached any
6 decisions regarding that issue?

7 MR. MINNICK: The Department feels that the
8 aggregation of the two projects is not valid, that they
9 are two separate projects.

10 MR. WILKINS: And is that determination based on
11 CEQA?

12 MR. MINNICK: It's based on the time in which the
13 two projects were developed, the distance and the analysis
14 by CEQA.

15 MR. WILKINS: Has the County reviewed the CEC
16 staff's conclusions regarding aggregation?

17 MR. MINNICK: Yes.

18 MR. WILKINS: And does the County have any
19 opinion regarding those conclusions?

20 MR. MINNICK: We concur with the conclusions.

21 MR. WILKINS: If the County found these projects
22 should be aggregated, do you have an opinion or does the
23 Department have any opinions regarding how this might
24 affect the County?

25 MR. MINNICK: Well it would require that all the

1 projects of that size to go back before the CEC, which
2 would slow the County processing of geothermal projects
3 and possibly limit the use of the resource that we have.

4 MR. WILKINS: Does the County intend to continue
5 to process geothermal projects with under 50 megawatts of
6 generating capacity, consistent with CEQA and the County's
7 geothermal element?

8 MR. MINNICK: Yes.

9 MR. WILKINS: That's all I have on direct.

10 HEARING OFFICER CELLI: Thank you.
11 Cross-examination by staff?

12 STAFF COUNSEL OGATA: We have no questions.

13 HEARING OFFICER CELLI: Thank you.

14 Cross-examination by respondent?

15 MR. ELLISON: No questions.

16 HEARING OFFICER CELLI: Thank you.

17 Cross-examination by complainant?

18 CROSS-EXAMINATION OF IMPERIAL VALLEY PANEL

19 BY MS. KLEBANER:

20 Q One question for Mr. Minnick. What was the date
21 for the public comment period on the Draft EiIR for the
22 East Brawley project?

23 MR. MINNICK: The date was May of 2011.

24 MS. KLEBANER: Thank you. And is that the
25 beginning of the comment period? What was the range for

1 the comment period?

2 MR. MINNICK: It was no less than 45 days and
3 that was the beginning.

4 MS. KLEBANER: Thank you.

5 HEARING OFFICER CELLI: Nothing further?

6 MS. KLEBANER: Nothing further.

7 HEARING OFFICER CELLI: Thank you. Redirect?
8 Before you do actually the Committee may have some
9 questions.

10 Did the Committee -- rather the County. I used
11 the same abbreviation so I need to change that. Did the
12 County of Imperial ever inquire whether there was
13 jurisdiction from the Energy Commission? Either Mr.
14 Minnick or Mr. Cabanilla.

15 MR. MINNICK: With regards to these projects?
16 This is Mr. Minnick.

17 HEARING OFFICER CELLI: To either of these
18 projects or both.

19 MR. MINNICK: The County understands the
20 regulations with regards to 49.9. And although we do
21 notice the CEC on projects we didn't necessarily inquire
22 about whether or not we had authority.

23 HEARING OFFICER CELLI: So the answer was, no
24 inquiry, Mr. Minnick?

25 MR. MINNICK: Yes, that would be correct.

1 HEARING OFFICER CELLI: And Mr. Cabanilla, you
2 agree with that?

3 MR. CABANILLA: That is correct.

4 HEARING OFFICER CELLI: Okay. You said or one of
5 you testified, I believe, that there is a condition of
6 certification or a condition that says that there is a
7 limit on the megawattage.

8 MR. MINNICK: That is correct.

9 HEARING OFFICER CELLI: And you said that the way
10 that you enforce it -- so the condition that limits 50
11 megawatts is S-1-A, is that correct?

12 MR. MINNICK: Yes.

13 HEARING OFFICER CELLI: And then the enforcement
14 of that is G-12, which gives the Committee, or rather the
15 County, the discretion to ask the applicant, or Ormat in
16 this case, to inform you as to whether their output has
17 increased beyond 50 megawatts.

18 MR. MINNICK: It allows us to ask them pretty
19 much anything we want. But yes, that would be the
20 condition under which we would apply, should we need that
21 information or have any inclination that they were
22 exceeding what we permitted.

23 HEARING OFFICER CELLI: Okay. And do you ever,
24 do you have any other methods by which you would be able
25 to determine what their megawatt output is?

1 MR. MINNICK: No.

2 HEARING OFFICER CELLI: Okay. Redirect or
3 recross from the County of Imperial?

4 MR. WILKINS: Nothing.

5 HEARING OFFICER CELLI: Okay. Any further
6 questions from the Committee?

7 Any further cross?

8 Okay, thank you, Mr. Minnick and Mr. Cabanilla,
9 you are excused. And I want to --

10 MR. CABANILLA: Thank you.

11 HEARING OFFICER CELLI: Thank you very much.

12 Mr. Ogata, thank you for your patience. I know
13 we took the County out of turn. But since you live here.

14 STAFF COUNSEL OGATA: Well, I think we should
15 thank the staff. They're the ones that have to stay.

16 MR. WILKINS: The County would like to thank
17 staff also.

18 HEARING OFFICER CELLI: Thank you for being here.
19 I have, let's see. This is Exhibit?

20 STAFF COUNSEL OGATA: Three-zero-two.

21 HEARING OFFICER CELLI: Three-oh-two. So Exhibit
22 302 are the résumés or qualifications of Joseph Hughes,
23 Geoffrey Lesh and Shahab Khosmashrab.

24 STAFF COUNSEL OGATA: That's correct.

25 HEARING OFFICER CELLI: Do you have a panel that

1 you want to call?

2 STAFF COUNSEL OGATA: Yes. At this point I would
3 like to -- and for efficiency we'll call Mr. O'Brien as
4 well. We'll call Geoff Lesh, Joseph Hughes and Terry
5 O'Brien.

6 HEARING OFFICER CELLI: And while they're coming
7 to be sworn let me ask. Did we already, have I already
8 received into evidence 300 through 302? I believe I did.

9 STAFF COUNSEL OGATA: I believe we took care of
10 all that first thing this morning. But if not I'm happy
11 to just move them in again.

12 HEARING OFFICER CELLI: No, I think we did. So
13 300 through 302 are received into evidence. Please stand
14 to be sworn.

15 Whereupon,

16 JOSEPH HUGHES

17 GEOFFREY LESH

18 TERRENCE O'BRIEN

19 were duly sworn and testified as follows:

20 THE REPORTER: Please state and spell your names
21 for the record.

22 MR. LESH: Geoffrey Lesh, G-E-O-F-F-R-E-Y,
23 L-E-S-H.

24 MR. HUGHES: Joseph Hughes, J-O-S-E-P-H, Hughes,
25 H-U-G-H-E-S.

1 MR. O'BRIEN: Terrence O'Brien, T, double-R,
2 E-N-C-E, O, apostrophe, capital B, R-I-E-N.

3 STAFF COUNSEL OGATA: Mr. Hearing Officer, just
4 to explain what's going on here. So we have staff's
5 assessment, which was written by Joseph Hughes, Shahab
6 Khosmashrab and Geoff Lesh. Shahab is out of the country
7 and so Mr. Hughes and Mr. Lesh are going to be sponsoring
8 this testimony.

9 To honor CURE's request that we try to focus
10 cross-examination to those witnesses with respect to their
11 testimony, let me know if announce which parts of the
12 testimony that these individuals will be sponsoring.

13 The Introduction will be sponsored by Mr. Hughes.
14 The first section on Analysis will be sponsored by Mr.
15 Lesh. The first paragraph on the North Brawley will be
16 sponsored by Mr. Hughes. With respect to questions about
17 the equipment, Mr. Lesh will respond to those. With
18 respect to the calculations, Mr. Hughes will respond to
19 those.

20 The paragraphs below the table, Mr. Lesh will
21 respond to those. That would be true for the East Brawley
22 description. With respect to the both projects combined
23 aggregation facts, Mr. Lesh will respond to those
24 questions. And he will also respond to the questions
25 under Conclusions.

1 Mr. O'Brien has filed separate testimony with
2 respect to aggregation and so he will be available to
3 respond to those questions after we take the testimony of
4 Mr. Lesh and Mr. Hughes.

5 HEARING OFFICER CELLI: Okay, let's first begin
6 by asking, is there any objection to these parties being
7 deemed witnesses from CURE? I mean, being deemed as
8 experts?

9 MS. KLEBANER: No objection from CURE.

10 HEARING OFFICER CELLI: Ormat, respondent?

11 MR. ELLISON: No objection.

12 HEARING OFFICER CELLI: And County of Imperial?

13 MR. WILKINS: County of Imperial has no
14 objection.

15 HEARING OFFICER CELLI: Okay, then we will not
16 need to go through their qualifications. They are all
17 deemed experts.

18 DIRECT EXAMINATION OF CEC STAFF PANEL

19 BY STAFF COUNSEL OGATA:

20 Q Okay, so just a couple of quick foundational
21 questions and then we'll turn them over for
22 cross-examination. So to either one of you, since I don't
23 know which one can respond to this question. Is this the
24 testimony that all three of you worked on with respect to
25 the calculation for the Commission's jurisdictional

1 purposes?

2 MR. HUGHES: Can you repeat the very last part?
3 Is it?

4 STAFF COUNSEL OGATA: Is this the analysis that
5 you prepared with respect to the Commission's jurisdiction
6 for the megawattage calculation?

7 MR. HUGHES: That is correct.

8 STAFF COUNSEL OGATA: In looking at this it
9 appears that the tables that we have, this is public
10 information, is that correct?

11 MR. HUGHES: That's correct as well.

12 STAFF COUNSEL OGATA: Did you look at the
13 confidential information that was submitted by Ormat?

14 MR. HUGHES: Yes we did.

15 STAFF COUNSEL OGATA: Did you use that
16 information in your analysis?

17 MR. HUGHES: We used that information to support
18 the analysis. However, what's presented was what was made
19 available to the public.

20 STAFF COUNSEL OGATA: Okay. I think that's all
21 the questions I have so we'll allow them to be
22 cross-examined at this point.

23 HEARING OFFICER CELLI: Thank you.
24 Cross-examination. First with the County of Imperial.
25 Any cross of these witnesses?

1 MR. WILKINS: Nothing from the County.

2 HEARING OFFICER CELLI: Respondent Ormat, any
3 cross of the staff witnesses?

4 MR. ELLISON: I have just a couple of questions.
5 And I'll just direct them generally to the panel and you
6 can choose which of you is the most appropriate to
7 respond.

8 CROSS-EXAMINATION OF THE STAFF PANEL

9 BY MR. ELLISON:

10 Q The first question is, if a member of the public
11 was concerned that a power plant within the Energy
12 Commission's jurisdiction was being constructed without an
13 Energy Commission permit, if they were to inform you of
14 that concern or inform you of documents by way of a letter
15 or a phone call, how would you respond?

16 MR. O'BRIEN: Well in that scenario we would
17 endeavor to have a communication with the individual. But
18 if we were unable to do that we would make inquiries to
19 the project developer and any other appropriate source of
20 information to determine whether or not there was a
21 project that was subject to the Energy Commission's
22 jurisdiction.

23 And based upon the information we obtained in
24 that process we would determine whether there was a cause
25 for us to go forward to do an analysis in terms of the

1 generating capacity of the facility. And internally, if
2 we felt that there was cause for additional examination we
3 would have internal discussions with the Executive Office
4 and then with the Siting Committee.

5 STAFF COUNSEL OGATA: And for the record, that
6 was Terry O'Brien, who is the Deputy Director of the
7 Siting Division.

8 MR. ELLISON: So it is not necessary for a member
9 of the public to file a formal complaint in order to get
10 the staff to look into something like that, correct?

11 MR. O'BRIEN: That's correct.

12 MR. ELLISON: And without any input of that
13 nature from the public does the Energy Commission staff
14 protect its jurisdiction by conducting its own, if you
15 will, survey of power plants being constructed in
16 California?

17 MR. O'BRIEN: We don't conduct, per se, a survey
18 of projects being constructed in California for
19 non-jurisdictional projects. We become aware of them
20 through a variety of mechanisms. One is that we receive
21 from the clearinghouse, Office of Planning and Research,
22 Environmental Impact Reports that are prepared. Sometimes
23 we become aware of them through word of mouth, et cetera.
24 So there are various mechanisms by which we become aware
25 of projects. And obviously, if we believe a project might

1 be jurisdictional we follow-up on that.

2 MR. ELLISON: And have staff been following the
3 development of geothermal projects in Imperial County?

4 MR. O'BRIEN: Staff is aware of geothermal
5 development in Imperial County and we are aware of
6 geothermal development in other areas of the state.

7 MR. ELLISON: And with respect to the CEQA
8 documents that have been prepared by the County and filed
9 through the clearinghouse for North Brawley and East
10 Brawley, would staff be aware of those documents?

11 MR. O'BRIEN: Yes.

12 MR. ELLISON: That's all I have, thank you.

13 HEARING OFFICER CELLI: Cross by CURE?

14 MS. KLEBANER: No cross, thank you.

15 HEARING OFFICER CELLI: Redirect from staff?
16 Well, before you do the Committee will probably have some
17 questions and then you can redirect.

18 Mr. O'Brien, could you testify about the source
19 of the information upon which you based your declaration
20 that is part of the Exhibit number -- that is 301.
21 Exhibit 301 is your declaration. And the Committee would
22 like to know the source of the information that you made
23 your declaration on.

24 MR. O'BRIEN: It was based upon internal
25 discussions with the staff of the Siting Division, looking

1 at what the staff had prepared and discussions with the
2 staff counsel.

3 HEARING OFFICER CELLI: You, of course, didn't go
4 to East Brawley and North Brawley, the sites themselves?

5 MR. O'BRIEN: That is correct.

6 HEARING OFFICER CELLI: Okay. Did you know
7 whether staff went down there to look at the sites?

8 MR. O'BRIEN: I don't believe we had any specific
9 site visits based upon this complaint.

10 HEARING OFFICER CELLI: And I can extend that
11 question out to the whole panel, it's not just Mr.
12 O'Brien. If you know, has anyone been down to North
13 Brawley or East Brawley sites to conduct any sort of site
14 visit?

15 MR. HUGHES: I'm not aware of any site visits by
16 staff. I myself haven't been down there.

17 MR. LESH: This is Geoff Lesh. I have not.

18 HEARING OFFICER CELLI: In your analysis that --
19 I know that you sent an inquiry, I believe it's in the
20 record as an exhibit, the inquiry letter to Ormat. Isn't
21 that one of -- I think that might even be one of CURE's
22 exhibits, is it not?

23 MS. KLEBANER: No, it's not one of CURE's
24 exhibits. You may be referring to an exhibit pertaining
25 to an inquiry for a different facility other than East

1 Brawley or North Brawley.

2 HEARING OFFICER CELLI: So the source of the
3 information with regard to Mr. Hughes and Mr. Lesh, and to
4 the extent that you know Mr. Khosmashrab, what was the
5 source of the information you relied on to determine the
6 jurisdictional level of the two Brawley projects, East
7 Brawley and North Brawley?

8 MR. LESH: Two questionnaires were sent to Ormat
9 from the staff with a series of questions to obtain the
10 information that we thought we would need to make the
11 analysis of whether or not they were jurisdictional.

12 We got back an answer to the questions. We
13 subsequently had some more information and got a couple of
14 other filings back from the project owner that explained
15 more details. And those two subsequent submissions were
16 the ones that became confidential.

17 HEARING OFFICER CELLI: Okay. But pretty much
18 all of the information that staff is relying on came from
19 Ormat?

20 MR. LESH: I think that's correct.

21 HEARING OFFICER CELLI: Okay. That is all of the
22 questions that the Committee had. Wait, one moment.

23 One more question, I'm sorry. There was the
24 additional question to Mr. O'Brien regarding the basis for
25 your conclusion that neither East Brawley or North Brawley

1 were greater than 50 megawatts.

2 MR. O'BRIEN: The basis of the conclusion was the
3 engineering analysis that was performed by staff.

4 HEARING OFFICER CELLI: Thank you. Staff,
5 redirect?

6 STAFF COUNSEL OGATA: Yes, if I may. Just
7 probably just one question following up on your question,
8 Mr. Celli, to staff.

9 REDIRECT EXAMINATION OF THE STAFF PANEL
10 BY STAFF COUNSEL OGATA:

11 Q The Hearing Officer just asked whether or not the
12 information you used to do your analysis was all from
13 Ormat. Is that true or did you do some independent
14 analysis with respect to checking facts for the equipment?

15 MR. HUGHES: We did look at engineering
16 specifications that were provided by manufacturers and had
17 guarantees along with pump performance diagrams and
18 information such as that. However, that all also came
19 through Ormat. And that was part of the confidential
20 filing.

21 STAFF COUNSEL OGATA: Okay, that's all I have,
22 thank you.

23 HEARING OFFICER CELLI: Recross from County of
24 Imperial?

25 MR. WILKINS: Nothing from County of Imperial.

1 HEARING OFFICER CELLI: Recross from the
2 respondent?

3 RE CROSS EXAMINATION OF THE STAFF PANEL
4 BY MR. ELLISON:

5 Q Just following up on this same topic. In
6 reviewing the information that was provided to you did you
7 exercise your independent judgement about the conclusion
8 that you ultimately came to?

9 MR. HUGHES: Yes I did.

10 MR. ELLISON: And if you felt that you needed
11 more information up to and including a visit to the site
12 would you have done that to reach your determination?

13 MR. HUGHES: Yes I would have.

14 MR. ELLISON: That's all I have, thank you.

15 HEARING OFFICER CELLI: Recross by CURE?

16 MS. KLEBANER: CURE has no recross, thank you.

17 HEARING OFFICER CELLI: Thank you. Then this
18 panel is excused. Thank you very much. Thank you, staff.

19 Now, we are at the point. It's almost six p.m.

20 Was there anything further from CURE, any further --

21 MS. KLEBANER: Yes. We're discussing moving into
22 the record the confidential exhibits 203 and 204 that were
23 discussed during testimony today.

24 HEARING OFFICER CELLI: Is there any way that we
25 can limit it down? Because I know there's a whole lot of

1 documents in there. Maybe you didn't use them all. Maybe
2 a certain couple of pages?

3 MS. KLEBANER: Well, the best way to do it is to
4 keep it together because there is a list of documents that
5 comprise 203 and 204 with individual document numbers.
6 Which can only be cross-referenced by looking at the
7 electronic version of each document.

8 HEARING OFFICER CELLI: Okay, let me go off the
9 record for a moment.

10 (Off the record at 5:56 p.m.)

11 (On the record at 5:56 p.m.)

12 HEARING OFFICER CELLI: The way that the
13 Committee would like to deal with this, Ms. Klebaner, is
14 receive 203 -- so it's 203 and 204 will be received and
15 sealed and really only available to the Committee. It
16 would not be part, made part of the public record.

17 And again, Mr. Petty, I want to reiterate that
18 that part that was the in-camera hearing cannot be made
19 part of the general transcript. I guess we'll need two
20 separate transcripts.

21 And if you could provide your disk with those
22 special numbers so that I can relate them to the testimony
23 in the transcript, the 208-10, et cetera. Then the way we
24 would do it is you would have to deliver it to my office
25 under seal.

1 MS. POTTENGER: Hearing Officer Celli, a disk of
2 those exhibits were provided to you along with Ormat's
3 prehearing conference.

4 HEARING OFFICER CELLI: Was that -- so you gave
5 me a prehearing conference disk. And included in that
6 were all of -- 203, 204, all the confidential are included
7 in that?

8 MS. POTTENGER: We had a disk marked
9 "confidential" that we supplied to you.

10 HEARING OFFICER CELLI: Yes.

11 MS. POTTENGER: And also to Chairman Weisenmiller
12 and Commissioner Douglas.

13 HEARING OFFICER CELLI: Okay. So because I have
14 that I don't need what CURE is suggesting to give me, it's
15 the same thing.

16 MS. POTTENGER: Correct.

17 HEARING OFFICER CELLI: Okay.

18 MS. POTTENGER: That's right.

19 HEARING OFFICER CELLI: Well then I don't need to
20 take it in. Other than to say for the record that we
21 would include 203 and 204 in the received documents, under
22 seal, from Respondent Ormat.

23 Now having said that. I believe I have now
24 received 200 through 206 from Ormat. Is that correct?

25 MS. POTTENGER: Yes, that's correct. We'd like

1 to move all exhibits from Exhibit 200 through 206 into the
2 record.

3 HEARING OFFICER CELLI: Any objection from CURE?

4 MS. KLEBANER: None from CURE.

5 HEARING OFFICER CELLI: Staff?

6 STAFF COUNSEL OGATA: No objection.

7 HEARING OFFICER CELLI: Imperial?

8 MR. WILKINS: No objection, County of Imperial.

9 HEARING OFFICER CELLI: Okay, 200 through 206 are
10 received; 203 and 204 are received confidentially under
11 seal.

12 MS. KLEBANER: CURE would also like to move in as
13 Exhibit 52 the testimony of David Marcus titled Opening
14 Foundational Examination.

15 HEARING OFFICER CELLI: Any objection,
16 respondent?

17 MR. ELLISON: No, provided that it's also under
18 seal. I think some of his testimony, including the
19 written testimony, has confidential information in it.

20 HEARING OFFICER CELLI: Any objection, staff?

21 STAFF COUNSEL OGATA: No, not with that addition
22 that it be confidential.

23 HEARING OFFICER CELLI: Any objection, County of
24 Imperial?

25 MR. WILKINS: No objections from the County of

1 Imperial.

2 HEARING OFFICER CELLI: Okay, 52 is received. So
3 1 through 52 were received from CURE and 52 will be
4 confidential and under seal.

5 Anything further from CURE?

6 MS. KLEBANER: Nothing more, thank you.

7 HEARING OFFICER CELLI: Thank you. Anything
8 further from any of the parties? Respondent.

9 MS. POTTENGER: Charlene Wardlow had one minor
10 correction to the testimony that she gave earlier in
11 response to the Committee's questions regarding whether
12 the Energy Commission contacted Ormat regarding the
13 capacities -- excuse me, requesting information regarding
14 the plants.

15 I believe Ms. Wardlow stated that she received a
16 letter from Ms. Allen regarding the East Brawley plant but
17 it was actually the North Brawley plant. Would you like
18 her to come up and make that correction?

19 HEARING OFFICER CELLI: Is that necessary,
20 parties? CURE, do we need to have her come up and correct
21 her testimony on the record?

22 MS. KLEBANER: We don't see a reason for it, no.

23 HEARING OFFICER CELLI: Okay, so basically I'm
24 going to ask that we stipulate that her testimony was
25 having to do with North Brawley not East Brawley,

1 vis-à-vis a letter from the Energy Commission. Imperial?

2 MR. WILKINS: The County will stipulate.

3 HEARING OFFICER CELLI: Staff?

4 STAFF COUNSEL OGATA: Stipulate.

5 HEARING OFFICER CELLI: Okay then. Thank you,
6 Ms. Wardlow. Accidents will happen, people misspeak, I do
7 it all the time.

8 So anything further from Ormat? Respondent?

9 MS. POTTENGER: No, thank you.

10 HEARING OFFICER CELLI: Anything further from
11 staff?

12 STAFF COUNSEL OGATA: Are you going to go over
13 the schedule again just to make sure we're all clear about
14 the further proceedings from this point on?

15 HEARING OFFICER CELLI: I can. What I'm about to
16 do, I just want to make sure everybody is okay so I can
17 get to public comment.

18 STAFF COUNSEL OGATA: Okay, yeah. Nothing
19 further then. With respect to our evidence nothing
20 further.

21 HEARING OFFICER CELLI: Okay, thank you.

22 NOTIFICATION: Please pardon the interruption.
23 Your conference contains less than three participants at
24 this time.

25 HEARING OFFICER CELLI: Oh no it hasn't.

1 (Laughter).

2 Anything further from Imperial?

3 MR. WILKINS: Nothing further from the County.

4 HEARING OFFICER CELLI: Okay, thank you.

5 Well, ladies and gentlemen then, the hearing is
6 now completed and we are going to go to the public comment
7 section. While I have you on the phone and before this
8 thing cuts out I am going to unmute everybody and ask --
9 Don Campbell, did you have any public comment you wish to
10 make?

11 MR. CAMPBELL: No.

12 HEARING OFFICER CELLI: Thank you. Jim Minnick,
13 any public comment?

14 (No response.)

15 HEARING OFFICER CELLI: I think he hung up. Mark
16 Nero, did you want to make a comment?

17 MR. NERO: No.

18 HEARING OFFICER CELLI: Thank you. Mavis
19 Scanlon, did you wish to make a comment? Mavis?

20 (No response.)

21 HEARING OFFICER CELLI: She doesn't appear to
22 have a microphone.

23 Ramona with no last name, did you wish to make a
24 comment? Ramona?

25 (No response.)

1 HEARING OFFICER CELLI: Okay, Richard Cabanilla
2 was a testifier. Did you wish to make a comment?

3 MR. CABANILLA: No comment.

4 HEARING OFFICER CELLI: Okay. Rosario Gonzalez,
5 did you wish to make a comment?

6 MS. GONZALEZ: Not at this time, thank you.

7 HEARING OFFICER CELLI: Thank you. So I've
8 spoken to everyone on the list on the phone with the
9 exception of Ramona. Ramona, did you want to speak up and
10 be heard, make a public comment?

11 MS. COTA: No thank you.

12 HEARING OFFICER CELLI: Thank you very much for
13 listening in. I wasn't sure you were even able to talk to
14 us so thank you for that.

15 That being the case I have now heard from
16 everybody on the telephone.

17 I don't see anyone from the public. Ms.
18 Jennings, do we have any public commenters here? Okay.

19 Then so ends the public comment section of our
20 hearing. I just want to acknowledge that we started
21 public comment at six o'clock. But we had sort of
22 guesstimated that it would start at four so I hope I
23 didn't have disgruntled people sitting there from four to
24 six and then leaving before they go a chance to speak.

25 The last section here is I want to make it clear

1 again. Let me open up my dates. Okay, because we were
2 able to finish the hearing today, opening briefs will be
3 due by noon, and we mean noon, like 12 o'clock sharp,
4 October 12, 2011. That's opening briefs.

5 And in the opening briefs I expect to hear "why"
6 from CURE and what evidence and where and how is it proven
7 that jurisdiction is conferred upon the Energy Commission,
8 okay.

9 And of course Ormat and the other parties are
10 going to, in their opening briefs, explain their
11 positions.

12 I am going to ask the respondent to address that
13 motion to dismiss in the opening brief as well. If you
14 could brief your motion to dismiss and the laches issue.
15 I'm trying to think if there are any other issues.
16 Nothing really comes to mind right now that need to be
17 singled out and I need to order, unless the parties can
18 tell me that any particular issue needs to be briefed.

19 Okay. So staff, your opening brief is optional
20 but I would certainly want to see a rebuttal brief from
21 staff. I think the same is true with the intervenor. An
22 opening brief.

23 You know, these briefs are very helpful to the
24 Committee. And to the extent that you tell us where we
25 can find the evidence that supports your position and what

1 law supports your position is the extent to which we can
2 give it whatever weight you think we should. So if you
3 bring it to our attention you increase the odds.

4 With that I am going to hand the hearing back to
5 Commissioner Weisenmiller, Chairman Weisenmiller, for
6 adjournment.

7 ASSOCIATE MEMBER WEISENMILLER: I would like to
8 thank the parties for their participation today. I think
9 we made a lot of progress in getting a good record and
10 looking forward to the briefs. Thanks again.

11 HEARING OFFICER CELLI: Thank you. We are
12 adjourned.

13 (Thereupon the Ormat Nevada, Inc.
14 Evidentiary Hearing was adjourned
15 at 6:06 p.m.)
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CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Evidentiary Hearing; that it was thereafter transcribed.

I further certify that I am not of counsel or attorney for any of the parties to said hearing, nor in any way interested in the outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 29th day of September, 2011.

PETER PETTY, CER**D-493

CERTIFICATE OF TRANSCRIBER

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.

September 29, 2011

JAMES F. PETERS
CERTIFIED SHORTHAND REPORTER
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